SECTION 2. SYSTEM SUMMARY

Sections 2.1, 2.2 and 2.3 depict the technical manual (TM) functions as they exist today within the individual services. These functions are portrayed using service unique diagrams and terms.

2.1 Army.

2.1.1 Army Background.

The Department of the Army (DA) Equipment Publications Program is the sole official medium for dissemination of Army TMs. Army TMs deal with the installation, operation, maintenance, training, and parts support of Army equipment. TMs include TMs [such as Repair Parts and Special Tools List (RPSTL), Initial Mandatory Parts List (IMPL), and Battle Damage Assessment and Repair (BDAR) Manuals], Technical Bulletins (TBs), Lubrication Orders (LOs), Supply Manuals (SMs), Supply Bulletins (SBs), Supply Catalogs (SCs), Modification Work Orders (MWOs), and Depot Maintenance Work Requirements (DMWRs).

Special note should be made that the Army currently consolidates all Manage, Stock, and Distribute activities for all types of Army wide publications (referred to as departmental publications). The Army has taken the position that this Functional Description (FD) must reflect this method of operation. The Army intends to use all functions (management, acquisition, improvement, storage, publication and distribution) for all Army publications to include DA administrative publications and forms, training and doctrinal publications, technical publications, and Command and Agency publications. Therefore, all references to TMs within this FD should be read to mean all Army publications.

2.1.1.1 Current Army TM System.

There are over 27,000 TMs in the Army inventory. TM management policy is centralized at Headquarters Army Materiel Command (AMC). Responsibilities for content maintenance have been decentralized to the Major Subordinate Commands (MSCs), each of which is responsible for one or more complete series of systems (aviation, communications electronics, vehicles, etc.). The current TM system is paper based, although efforts have begun to specify development and delivery of publications in digital, Department of Defense (DoD) Computer-aided Acquisition and Logistics Support (CALS) formats. The Army is committed to replacing the current paper system with EETMS, made up of computer display devices and software that will access digital TM data interactively, allowing Army users maximum benefits from

digital TMs. Development has begun in several areas to facilitate digital delivery of technical information to and facilitate use by the soldier in the field, most notably the Portable Maintenance Aid (PMA).

AMC, MSC, and Materiel Readiness Support Activity (MRSA) responsibilities can be divided into two functional areas. The first major functional area centers on the contents of TMs and directly involves the MSCs as proponents. The second major functional area centers on the management data that supports MSC operational and planning efforts to acquire, manage, and maintain/improve TMs and the U.S. Army Publications and Printing Command (USAPPC) efforts to publish, stock and distribute them directly to users in the field.

Current Army TM workloads have continued to outstrip the resources available. Many of the automation assets are aged and are becoming increasingly difficult to maintain. Lack of a standard system for pre-press activities has made it virtually impossible for MSCs to share common data, resulting in unnecessary workloads and costs associated with duplication of TM data. Manual processes, such as keying data from hand-scribed publication requisition forms and manually sorting publications for shipment are time consuming, labor intensive, inefficient, and expensive processes that have been proven by commercial industry to be prime candidates for automation. The joint TM system program is designed to provide the automation capabilities needed to modernize and streamline TM processes.

The Surgeon General is responsible for the medical portion of Army technical and equipment publications. This portion of the program is developed and managed in coordination with the Commanding General, U.S. Army Medical Materiel Command.

2.1.1.2 Army TM Responsibilities.

The existing processes for acquiring, managing, and maintaining Army TMs are centralized within U.S. Army Materiel Command (USAMC). The following MSCs are the principal proponents of TMs. Each is listed with the numbers of publications for which the proponent is principally responsible:

U.S. Army Armament, Munitions and Chemical Command (AMCCOM); 3068.

U.S. Army Aviation Systems Command (AVSCOM); 1789.

U.S. Army Communication Electronics Command (CECOM); 11,176.

U.S. Army Missile Command (MICOM) [U.S. Army Metrology and Calibration Center (AMCC) data are included with MICOM]; 6378.

U.S. Army Tank-Automotive Command (TACOM); 2163.

U.S. Army Troop Support Command (TROSCOM); 2561.

The existing processes for acquiring, managing and maintaining Army TMs are centralized within USAMC. U.S. Army Force Integration Support Agency (USAFISA) is designated lead agent for acquiring, managing and maintaining supply catalogs for Sets, Kits or Outfits (SKOs). USAMC Catalog Data Agency (CDA) maintains the SKO Supply Catalog Publications Data Base.

USAMC MRSA provides Army-wide management support for TMs. MRSA is also responsible for the preparation, coordination, and maintenance of Army Technical Manual Specifications and Standards (TMSS). MRSA also provides Army organizations with the information needed to identify the correct TM needed for each item of unit equipment/component through the Equipment Oriented Publications Data Base (EOPDB).

Each MSC currently develops and maintains MSC-unique management systems and data bases used to track the development and maintenance of the TMs for which they are responsible. USAPPC is responsible for publication, storage, and distribution of all Army publications, including TMs.

2.1.1.3 Army Automation.

The current Army TM process has become less and less effective in providing publications support because workloads have outstripped capabilities. The process is only partially automated.

2.1.1.3.1 The Automated Publications Production System (APPS).

The APPS initiative sought to automate the pre-press processes associated with maintenance of TMs. APPS implementation began with development of prototype electronic publishing capabilities at MICOM and AMCCOM. TROSCOM was tasked by HQ AMC to initiate an AMC-wide acquisition program to equip all MSCs with APPS systems, but funding limitations caused the effort to be terminated. A program, Interim APPS, was approved and coordinated by the Joint Committee on Printing in May 1988. The purpose of the Interim APPS effort was to provide the remaining MSCs (CECOM, TACOM, "SCOM and TROSCOM) partial capabilities, such as desktop publishing systems, to continue improvements needed in the maintenance of TMs.

2.1.1.3.2 USAPPC Publishing and Distribution Management Systems.

USAPPC publishing and distribution management systems have evolved since 1964 in a piecemeal fashion. Beginning with two separate publishing management systems, one each in Baltimore, MD and St Louis, MO, the systems were consolidated and upgraded to the present system which operates on an IBM 4331 hardware base in USAPPC's Baltimore, MD Publications Distribution Center (PDC) and on shared automated data processing (ADP) resources at other Army and Federal agencies. USAPPC also employs an automated warehousing system at the St Louis PDC for bulk storage and retrieval of TMs. USAPPC's publishing and distribution management systems consist of nine separate subsystems described in Section 5.1.1.3, Army Publications Logistics System (APLOGS).

2.1.1.3.3 Equipment Oriented Publications Data Base (EOPDB).

EOPDB is a management system that identifies all equipment publications to specific items of equipment, all of which are uniquely identified by National Stock Number (NSN) and Line Item Number (LIN). EOPDB was developed and is maintained by USAMC MRSA.

2.1.1.3.4 Equipment Publications Management System (EPMS).

The primary objective of the Equipment Publications Management System is to provide a management control and reporting system to support the development and maintenance of Army equipment publications.

CECOM was tasked by AMC to develop EPMS with the expectation of it being offered to the other MSCs upon its completion. EPMS is currently under version 3.0 development. Version 1.0 was developed by a contractor and found to be inadequate for CECOM's needs. Version 2. was developed in-house and is still in use today. Version 3.0 is ready to go on contract.

2.1.1.3.5 Commodity Command Standard System (CCSS).

The Commodity Command Standard System (CCSS) is supported by the U.S. Army Information System Integration and Management Activity (SIMA) in St Louis, MO. CCSS contains publications-related repair parts data from Logistics Support Analysis Records (LSAR). Each MSC, however, maintains its own CCSS on the IBM platform available at that MSC. The data resident at each MSC is unique to the equipment/systems maintained by that MSC.

2.1.1.3.6 Joint Nuclear Weapons Publications System (JNWPS).

The Joint Nuclear Weapons Publications System (JNWPS) contains technical manuals on nuclear weapons and associated materiel designed and produced by the Department of Energy (DOE); related components designed and developed by DoD agencies; and such supplemental data or information determined-appropriate by either the DOE or DoD in connection with the general field of nuclear weapons. The JNWPS provides the DoD, the Defense Nuclear Agency (DNA), and the respective military departments authoritative instructions and data to supplement existing publications systems. Manuals included in the JNWPS are limited to those which are authenticated by two or more participating agencies and include general manuals and materiel manuals.

The Project Manager for Nuclear has designated AMCCOM's element at Picatinny Arsenal, NJ as Army's nuclear weapons proponent. Field Command, Defense Nuclear Agency (FCDNA) administers and acts as the principal DoD coordinating and approving agency to the DOE on all matters relating to the preparation, review, coordination, publication, issuance, and distribution of JNWPS manuals. Sandia National Laboratories (SNL) represents the DOE in its relationship with the DoD through FCDNA. SNL and FCDNA are located at Kirtland AFB, NM.

2.1.1.3.7 SKO Publication Data Base.

The SKO Publication Data Base is housed within the Army Central Logistics Data Base Master Data Record (ACLDB MDR) data base which contains the most current Logistics Management Data. USAMC CDA maintains the SKO Publication Data Base.

2.1.1.4 Army Modernization.

The joint TM system is the core program to modernize the Army TM process and encompasses the publications life cycle. Army joint TM system automated data systems (ADS) elements will be implemented by TM organizations at the sites described in Section 4.1.3.1, Tables 4-1A, 4-1B, and 4-1C.

2.1.2 Army Existing Methods and Procedures.

The management of the Army TM program is accomplished using DoD directives and standards and through the application of Army specifications, standards and regulations. The management inputs, controls, outputs, and mechanisms (ICOMS) are shown in Figure 2-1, U.S. Army - Technical Manual Program. With HQ DA DCSLOG oversight and through centralized management by HQ USAMC, the USAMC MRSA provides functional management and is responsible for writing and maintaining Army TMSS. The Army acquires TMs

through program executive officers (PEO) and program managers (PM) with the support of the USAMC MSCS. The MSCs maintain all TMs in response to Army needs. Technical manual reproduction, storage, and distribution services are provided by USAPPC and USAPPC PDCs in St Louis, MO and Baltimore, MD.

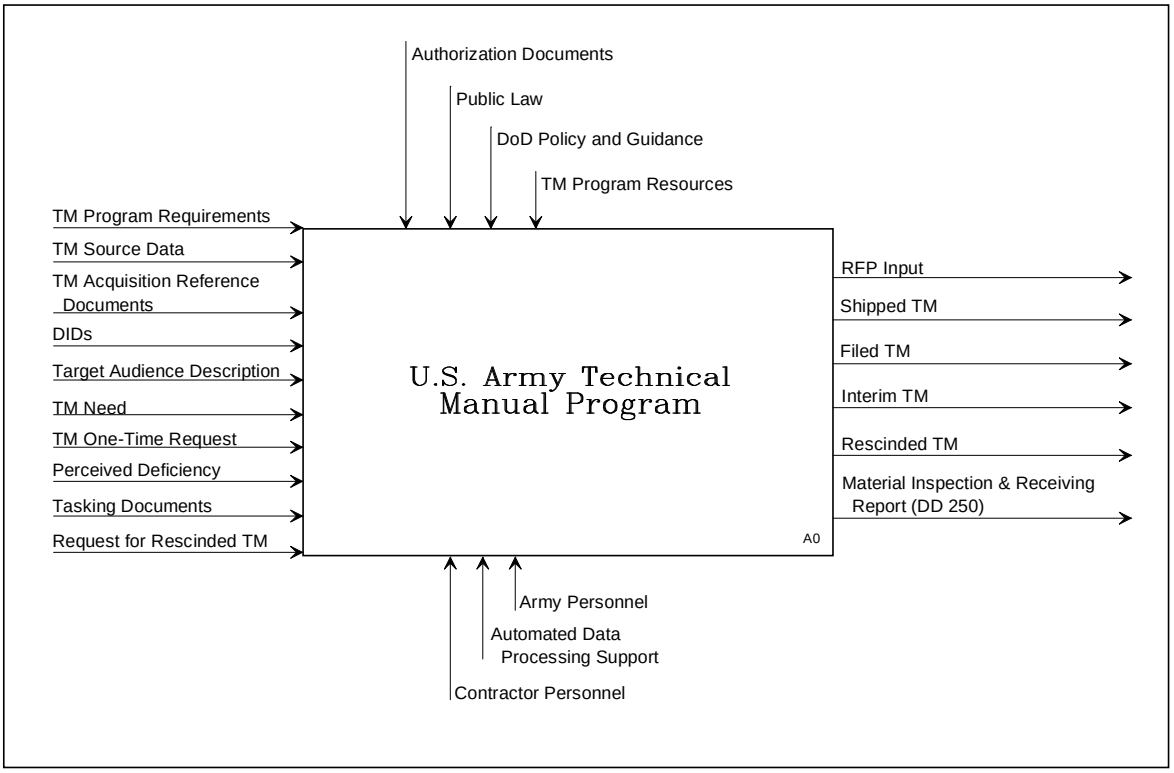

Figure 2-1, U.S. Army Technical Manual Program

2.1.2.1 Manage TM System (A1).

2.1.2.1.1 Army Description.

The TM management system ensures control and standardization of the major TM system functions: management, acquisition, maintenance/improvement, publication, stocking and distribution of TMs. The Army TM system, as depicted in Figure 2-2, is managed by USAMC. Supply Catalogs for SKOs are managed by USAFISA. FCDNA supplements the existing AMC publications management system with additional requirements to facilitate the administering of JNWPS. Individual TM processes include:

a. The creation and maintenance/improvement of TM Policy and Guidance (Army Regulations, Pamphlets, and TMSS).

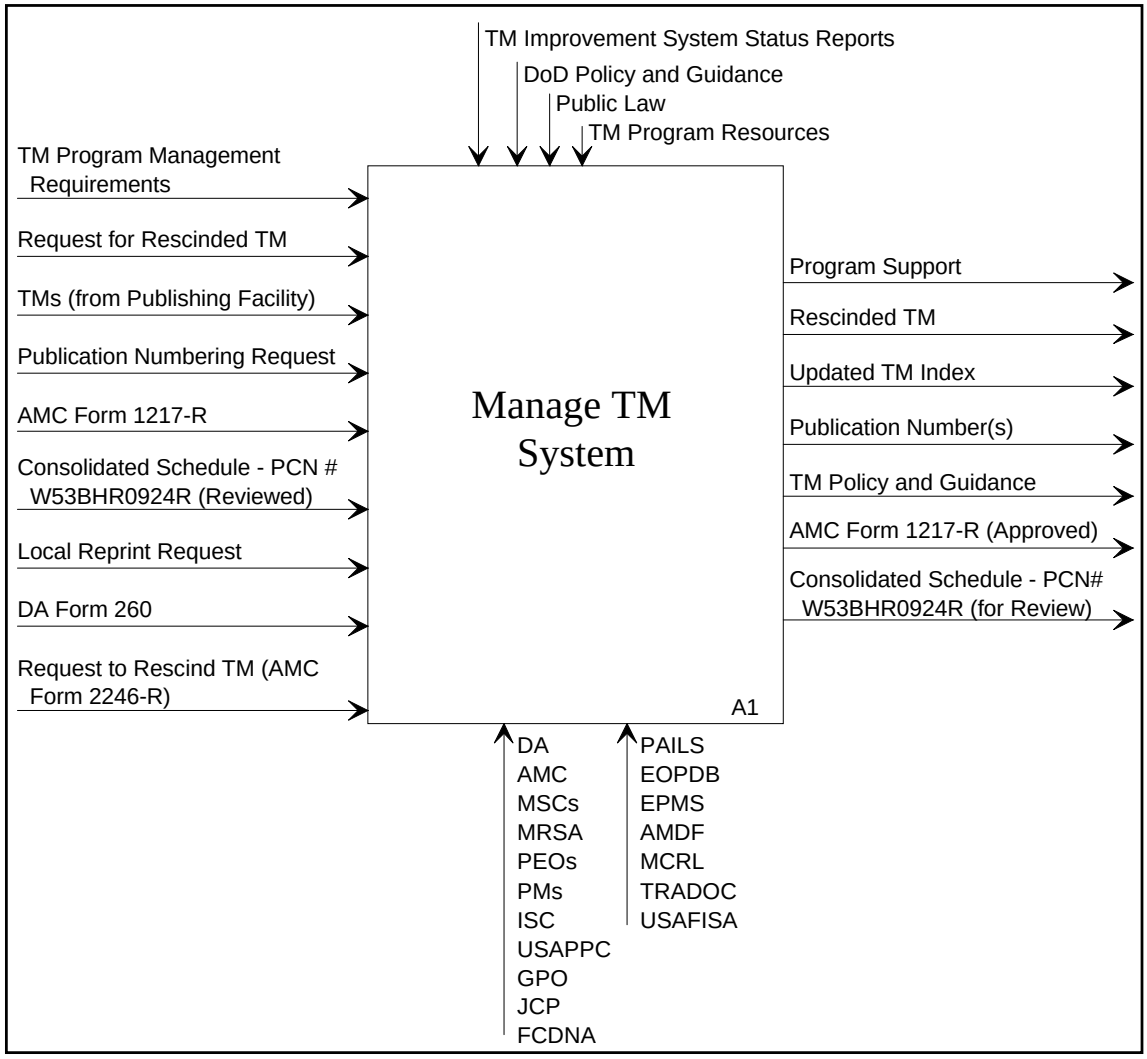

Figure 2-2, Army - Manage TM System

b. The collection, processing and reporting of information on system support requirements (budgeting, staffing, services, automated data processing support) needed to support the Army TM program operations.

c. Centralized control of TM numbering, indexing, and requisitioning.

d. Management of TM reference files at the MSCS.

2.1.2.1.1.1 Army - Manage Policy and Guidance (A11).

Army policy and guidance ensures a common approach to TM program operation. The Army TM program is managed through

Army policy and guidance. In response to new system management requirements, new or revised policy and guidance is developed, approved and published. These processes are shown in Figure 2-3, Army - Manage Policy and Guidance. Joint regulations and Memoranda of Agreement (MOA) am developed and implemented to identify and assign command responsibilities when multiple organizations are involved. TMSS control the development of TMs by defining format, style, and content requirements. Army Regulation (AR) 25-30, as supplemented, is the principle vehicle for incorporating DoD Policy and Guidance into Army TM policy and guidance and disseminating it.

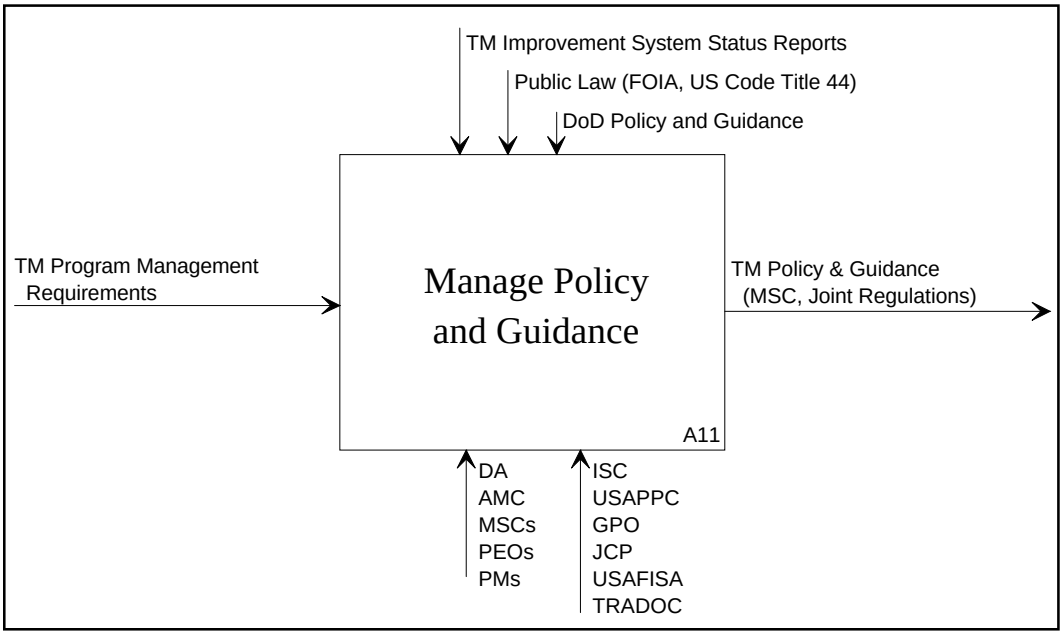

Figure 2-3, Army - Manage Policy and Guidance

2.1.2.1.1.2 Army - Provide Program Support (A12).

Program support for the acquisition and management of TMs, as shown in Figure 2-4, Army - Provide Program Support, provides the resources necessary for the TM program to operate. Ibis is accomplished through organizational responsibility, selection of responsible managers (TM Managers, equipment specialists, etc.), the creation of TM support units, the creation of review and support boards, and the allocation of personnel, facilities, services, funds, and automation resources required to support the TM program.

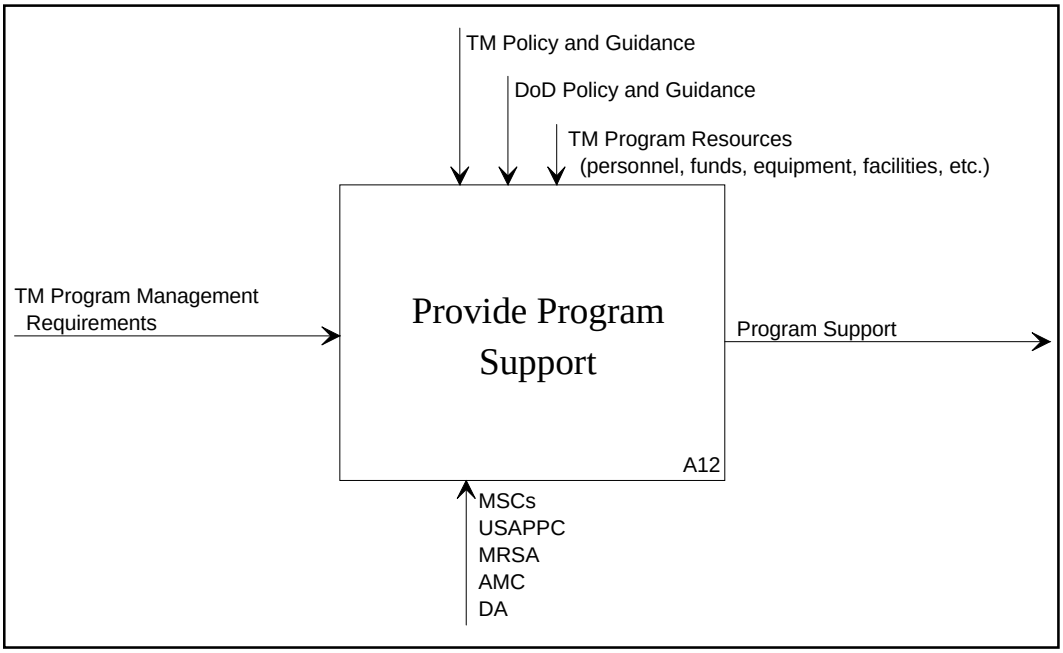

Figure 2-4, Army - Provide Program Support

Program support includes the requirement for different types of TM managers at various agencies, levels of command, and physical locations.

2.1.2.1.1.3 Army - Control TM Numbering and Indexes (A13).

Central control of TM numbering is accomplished at MRSA to ensure each TM is uniquely identified. AR 25-30 requirements for the control of TM numbering also includes reviews of actions taken to reinstate, supersede, cancel, or rescind a TM. The actions taken are reflected in the TM indexes. These processes are reflected in Figure 2-5, Army Control TM Numbering and Indexes.

The purpose of controlling TM numbering is to provide stability in TM numbering patterns and avoid inaccurate TM number assignments. MRSA controls TM numbering by issuing TM numbers in blocks by Federal Supply Class (FSC) to each MSC. The basic task of TM numbering is to group similar TM data into categories, systems, equipment series, and levels of maintenance by means of an identifying numeric or alphanumeric TM number.

For Army Nuclear TMs, the request for publication number is

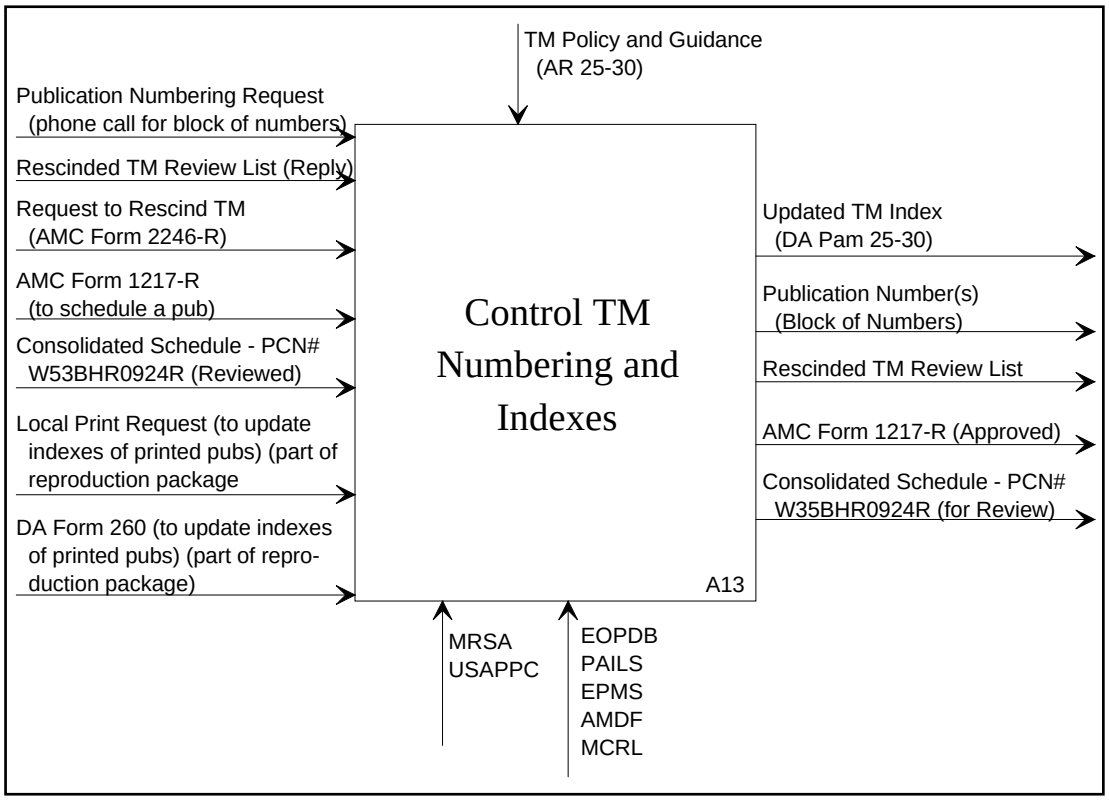

Figure 2-5, Army - Control TM Numbering and Indexes

sent to FCDNA on the FCDNA Form 70. Numbers are assigned and indexed in TM 39-0-1A, a JNWPS publication prepared by AMCCOM's Picatinny Arsenal facility.

MRSA further controls numbering by reviewing and approving MSC submitted Schedules for Preparation of Equipment Publications (AMC Form 1217-R). This form identifies the unique number assigned to each TM by the proponent MSC. MRSA uses this information to update EOPDB. Quarterly Publications Schedule Information is extracted from EOPDB by MRSA and sent to USAPPC. Based on the above schedule, MSC proponents are required by AR 25-30 to notify USAPPC of their intent to publish at least 18 months prior to the estimated print date. USAPPC establishes DA 12-Series form and block numbers based on this notification. The list of scheduled publications with their assigned form and block numbers are broadcast to publication account holders so that these account holders can forecast their future requirements. The final numbering control occurs when the publication is printed (via DA from 260 or Local Print Request). The request

for printing is used by USAPPC to update the publication index (DA PAM 25-30) to reflect that a new publication is being printed and how it will be distributed On a quarterly basis, MRSA publishes a Publication Schedule for MSC review, update, and return to MRSA. This updated list is used to update the Publication Schedule.

The rescission process is administered by MRSA. MRSA cross references NSNs in the EOPDB against those in the Army Master Data File (AMDF) and Master Cross-Reference List (MCRL). MRSA identifies potentially obsolete publications by selecting the publications for which NSNs have been deleted and providing the Rescinded TM Review List to the appropriate MSCS. The MSCs review and respond to the items on the lists. An AMC Form 2246-R "Request for Rescission of Publication" is completed and forwarded to MRSA by the MSC ff a manual is found to be no longer required for active Army use. The AMC Form 2246-R must be coordinated with the National Guard and Army Reserve. The coordinated AMC Form 2246-R will indicate if the manual is to be retained for use by the National Guard, Army Reserve, or Security Assistance Program (SAP) client. MRSA updates the EOPDB accordingly.

Indexes are a joint effort of MRSA and USAPPC. MRSA provides the data for Section 12, LIN to Publication Cross Reference Index, of DA Pamphlet 25-30 to USAPPC for publication.

Once a quarter, MRSA consolidates all coordinated AMC Form 2246-Rs and forwards them to USAPPC. USAPPC then updates the PAILS data base which is used to publish DA Pamphlet 25-30.

CECOM Communications. Security Logistics Support Activity (CCSLA) is the proponent for DA Pamphlet 25-35 which is the index of Communications Security (COMSEC) publications within the Army.

Army Nuclear weapons publications are indexed in TM 39-0-1A, a JNWPS publication, prepared by AMCCOM’s Picatinny Arsenal facility, printed by FCDNA, and distributed for Army by USAPPC’s St Louis PDC. FCDNA retains copies for their shelf stock and makes distribution to FCDNA, Air Force, Navy and SNL.

The 60-series Non-Nuclear Explosive Ordnance Disposal (EOD) TMs are produced, funded and managed by the Navy with Army management assistance in accordance with (IAW) DoD Directive 5160.62.

2.1.2.1.1.4 Army - Manage Publication Reference (A14).

The management of the MSC reference file is shown in Figure 2-6, Army - Manage Publication Reference. Copies of each

publications, change or revision are provided to the National Archives for record purposes. Another copy is provided to the MSC publication reference file. Stocks of publications rescinded for active use are retained for use by the National Guard, Army Reserve, or Security Affairs Program until complete rescission. Reference file copies of publications are retained in the appropriate MSC for a period of time specified by local policy. Requests for rescinded publications are forwarded to the National Archives.

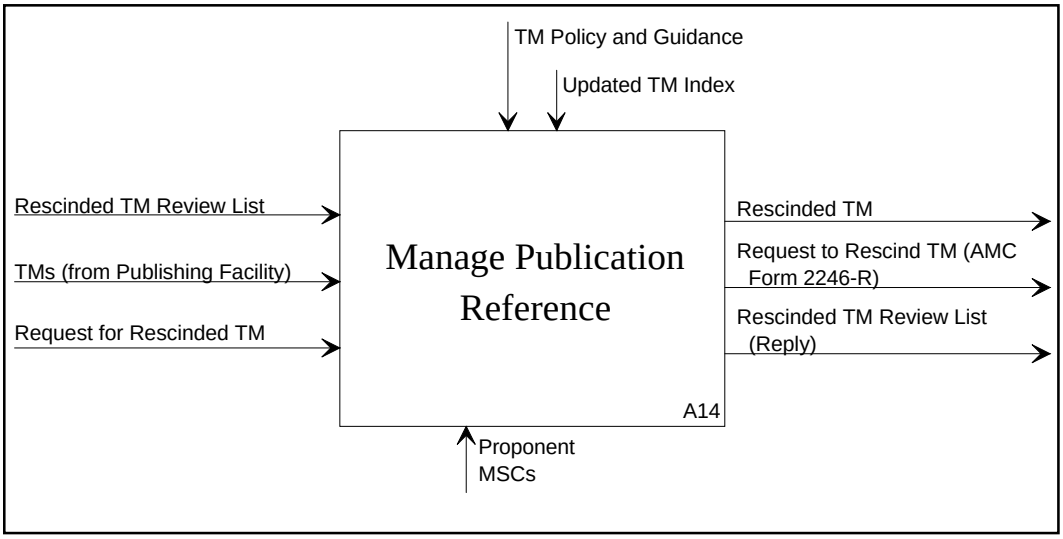

Figure 2-6, Army - Manage Publication Reference

Rescinded publications maintained for National Guard, Army Reserve, or the Security Affairs Program are available at the USAPDCs until stockage is exhausted. Once stock is exhausted the USAPDCs normally refer requests to the MSC reference file until total rescission when requests are forwarded to the National Archives.

The MSCs review and respond to the items on the Rescinded TM Review List. An AMC Form 2246-R is completed and forwarded to MRSA by the MSC for each manual no longer required for active Army use.

Copies of Nuclear related manuals indexed in TM 39-0-1 are maintained for five years after rescission by FCDNA.

The 60-Series Non-Nuclear TMS are warehoused, after rescission, by the Navy and can be released only upon receipt of validated requests through the Commanding Officer, Navy EOD

Technical Center, Indian Head, MD.

2.1.2.1.2 Current Army Ionizations and Personnel Responsibilities.

a. Department of the Army (DA):

1. Issues Army policy for managing the TM program and provides final authority for that policy.

2. Approves major changes to the TM program.

3. Approves all service tests and studies of new techniques for use in the TM program.

4. Reviews AR 25-30 to ensure it is consistent with the TM program.

b. U.S. Army Materiel Command (USAMC):

1. Manages the Army TM Program.

2. Budgets and funds for acquisition, maintenance, and printing of applicable TMs.

3. Chairs the USAMC Equipment Manuals Council.

4. Develops and maintains military specifications and standards.

5. Reviews and approves deviations and waivers to military specifications for which Army is the developing activity.

6. Establishes and operates the Army system for numbering TMs.

7. Maintains developmental cost information.

8. Establishes and operates the EOPDB system for indexing TMs and provides EOPDB data to USAPPC for publication in DA PAM 25-30.

c. Major Subordinate Commands (MSC):

1. Manage TMs.

2. Provide membership to the USAMC Equipment Manuals Council.

3. Establish and manage publication reference files.

4. Comply with AR 25-36 when joint service TMs are assigned.

5. Control the distribution of command-level TMs.

d. U.S. Army Publications and Printing Command (USAPPC):

1. Accomplishes U.S. Army Information Systems Command operational responsibilities with regard to the Joint Committee on Printing (JCP), the Public Printer, the Bureau of Engraving and Printing, and General Services Administration (GSA) on printing and duplicating matters.

2. Manages, stores, and distributes TMs.

3. Establishes and operates the Army's consolidated index system.

4. Establishes and operates the Army system for obtaining and determining initial distribution requirements.

e. U.S. Army Information Systems Command (USAISC):

1. Execute the Army Integrated Publishing and Printing Program (AIPPP).

2. Manage and operate the Army publishing, publications, printing and publications distribution systems.

f. U.S. Army TRADOC:

Provide membership to the USAMC Equipment Manuals Council.

g. USAFISA:

1. Acts as the lead agent for the Army SKO and tools programs.

2. Recommends changes to DA Policy.

3. Establishes procedures and provides guidance to manage the programs.

2.1.2.1.3 Army Equipment.

a. Standard office automation systems.

b. PAILS equipment (see Section 5 for more details).

c. EOPDB equipment (see Section 5 for more details).

d. EPMS equipment (see Section 5 for more details).

e. AMDF equipment (interface) (see Section 5 for more details).

f. MCRL equipment (interface) (see Section 5 for more details).

2.1.2.1.4 Army Deficiencies.

a. Current TM management is fragmented.

b. Current TMSS are outdated.

c. Current TMSS do not address digital data.

d. Current policies and procedures are outdated, incompatible, and do not address handling of digital data.

e. Current systems supporting TM management and production are fragmented, are not integrated, and do not satisfy all Army TM support requirements.

f. There is a severe lack of standard office automation equipment, personnel, and funds to support Army TM requirements.

g. The current system is inefficient in providing management the data needed to support decisions related to such key areas as budget, inventory, workload assignment, facilities, and related topics.

2.1.2.2 Acquire TMs (A2).

2.1.2.2.1 Army Description.

The Army acquires TMs for use in maintaining and operating weapon systems and equipment. All Army equipment and systems except those specifically excluded by regulation are operated and maintained according to procedures described in TMs. Requirements for new TMs result from weapon system acquisition, equipment acquisition, changes in operations and/or maintenance concepts and system modification programs. Those agencies involved in the TM acquisition process include the agency procuring the TMs (acquiring agency), the TM developer (either contractor or government), the TM user (using agency), and any other organizations directly or indirectly supporting the acquisition effort.

TM acquisition, as reflected in Figure 2-7, Army - Acquire

TMs, includes acquisition planning, development of government TM planning documentation, the review and approval of that documentation, controlling the TM development effort, and development of the TM.

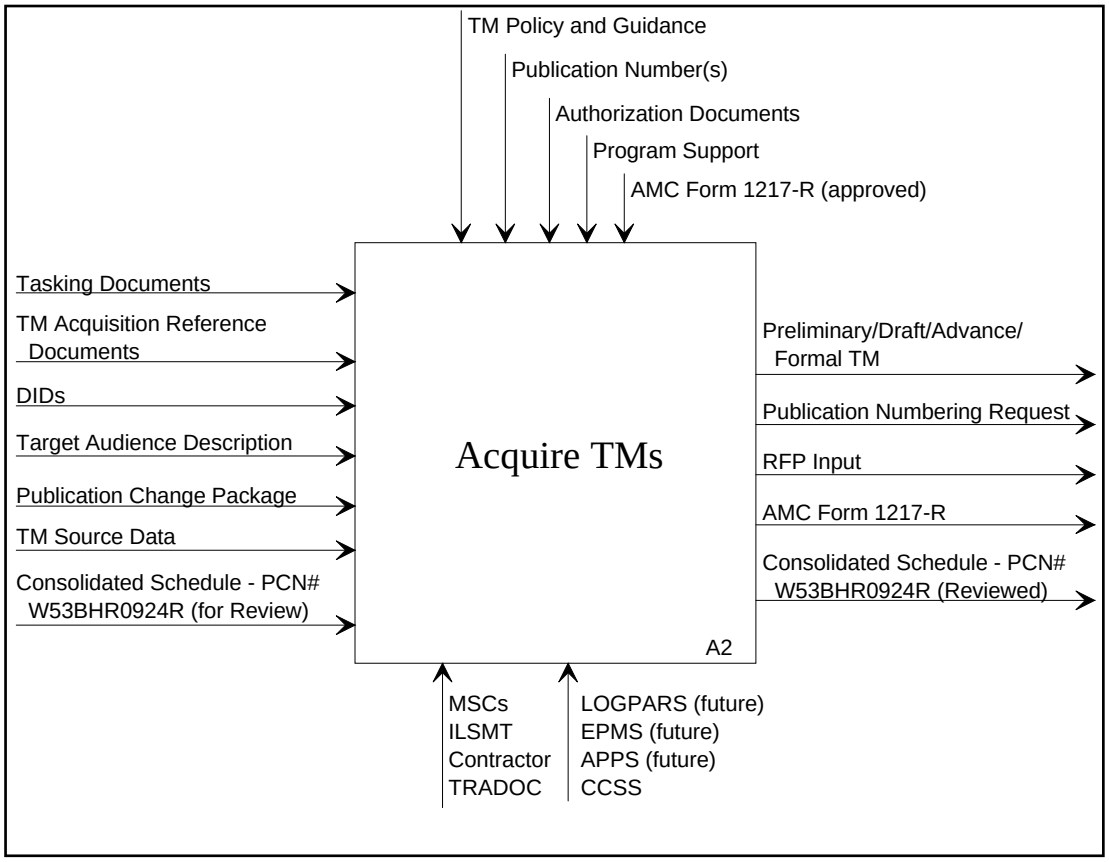

Figure 2-7, Army - Acquire TMs

The overall system program tasking documents identify and define the requirements for TMs to support the weapon system, equipment or modification being acquired. TM acquisition reference documents are used to guide the development effort and to assist in the development of program documentation.

2.1.2.2.1.1 Army - Develop Planning Documents for TM Acquisition (A21).

Planning documentation for TM acquisition is written by the Army to identify TM requirements for input to the Request for Proposal (RFP) and to plan for the organization, procedures, and schedules required to support and control development of TMs.

The process of developing planning documents for TM acquisition is depicted in Figure 2-8, Army - Develop Planning Documents for TM Acquisition. TM documentation requirements are gathered from system tasking documents, requirements analysis, meetings, and data calls. TM acquisition reference documents are used as a source for developing the required planning documents. The planning documents developed include TM Contract Data Requirements List (CDRL), Procurement Data Package, Statement of Work (SOW), Verification Plan (VP), and Technical Manual Plan (TMP).

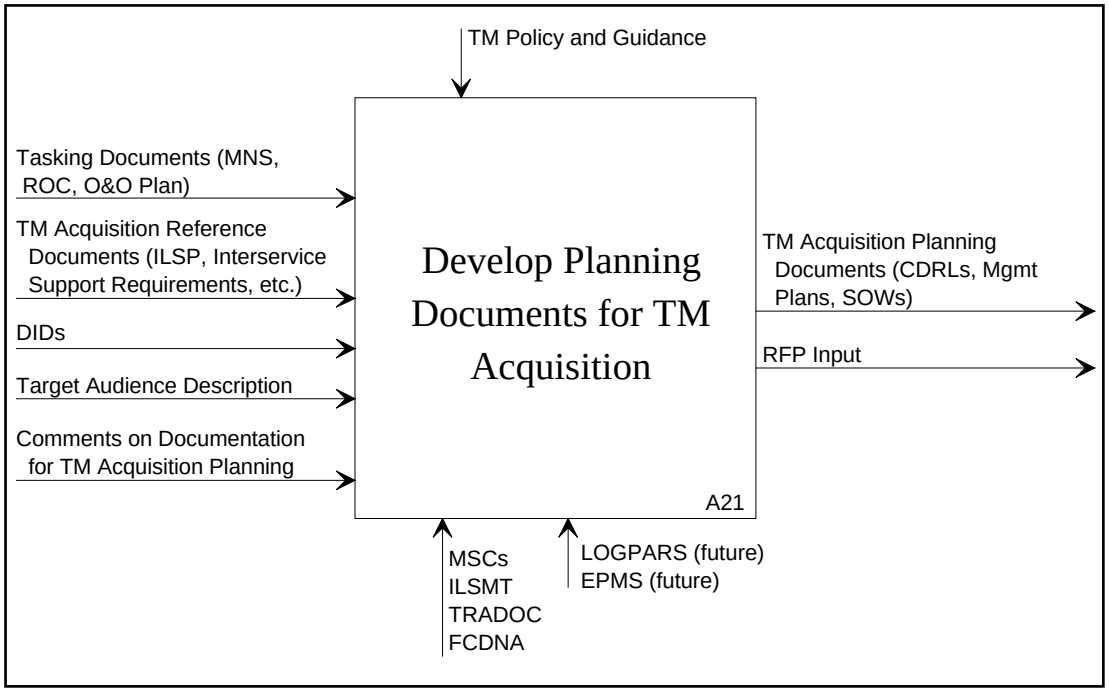

Figure 2-8, Army - Develop Planning Documents for TM Acquisition

Comments on TM acquisition planning documents received from various authorities assist in ensuring that the documents comply with applicable policy, guidance and legal requirements.

These documents identify the organizations involved in the acquisition process, the development schedules, required technical and management data, required documentation reviews (meetings and conferences), TM projected costs and plans for transfer of program management responsibility (PMR). These are then reviewed and coordinated with all interested parties.

Requirements documented in the Army TM development plans are

used to develop the draft input to the RFP. These documents identify specific TM program requirements and the methods and procedures used to control the TM acquisition effort. Specifically, they identify the organizations involved in the acquisition process, the development schedules, required technical and management data, required documentation reviews (meetings and conferences), projected costs and PMR transfer plans.

The documentation developed includes meeting minutes, technical requirements and drafts of the TM CDRL, SOW tasks related to TMs, Verification Plans, Integrated Logistics Support Plans (ILSP), and the supporting technical publications.

Once reviewed, coordinated, and approved by all required agencies, the documentation provides the guidelines for subsequent program management and technical manual development.

Training and Doctrine Command (TRADOC) provides a Target Audience Description which includes human factors information such as reading grade level, skills, experience, education, etc. of the personnel who will use a specific manual.

2.1.2.2.1.2 Army - Control TM Acquisition (A22).

Army control of TM acquisition ensures the accurate and timely development of TMs to meet Army needs. Control of the TM acquisition process, as shown in Figure 2-9, Army - Control TM Acquisition, is accomplished through review of the documentation developed by the Army for program management, review of contractor developed management plans, on-going reviews of the TMs as they are developed, and verification of the TMs.

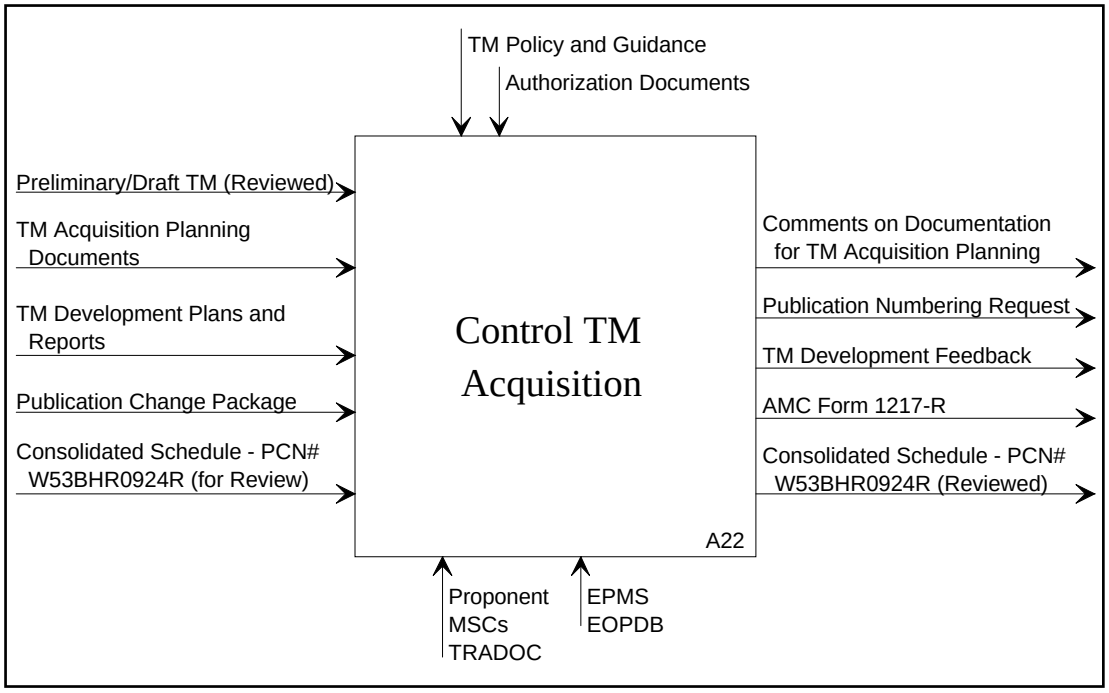

Figure 2-9, Army - Control TM Acquisition

Army TM plans are also reviewed and approved. Reviews are performed and comments and approvals are made on plans, reports, and draft Tms as produced by the developer (either the Army or contractor). Comments and approval/disapproval results are returned to the TM developer.

As a result of the approval/acceptance of TM plans and reports, the appropriate block of TM numbers is assigned by MRSA and the individual numbers are assigned by the proponent Initial distribution and fielding requirements are jointly established by the developer, the user, and the MSC in the ILSP, Materiel Fielding Plan, and the associated support plans.

TM acquisition planning documents are reviewed and comments provided by various authorities to ensure the documents comply with applicable policy, guidance and legal requirements.

Initial Guidance Conferences and In-Process Reviews (IPRS) are conducted to ensure that TMs are being prepared in accordance with the applicable TMSS for style and format and other contractual requirements. These reviews allow the Army acquiring agency to provide guidance concerning the technical content of the TMs and evaluate the progress of the TM development.

TMs will be validated by the developer (contractor or Army organization) to ensure they provide the user with technically accurate and readily understandable information.

Verification of TMs is the process by which a developer-validated draft is tested and proven by Army personnel for adequacy of operation and maintenance of systems/equipment acquired for operational units. Verification is also used to certify that TMs are technically accurate and compatible with the hardware and operating environment. Developing, using, supporting, and acquiring organizations, including U.S. Army TRADOC, assist in the planning and execution of the verification effort. In some cases, validation and verification can be accomplished in parallel.

Upon final review and approval, the TM is updated, authenticated, printed, and distributed for use.

After the development contract has been awarded but prior to the actual development, the TM must be scheduled through MRSA. This is accomplished with use of AMC Form 1217-R, Schedule for Preparation of Equipment Publications, which is forwarded to MRSA for action, and returned with MRSA approval. MRSA's approval is a prerequisite for TM development. The Consolidated Schedule list is provided quarterly to the MSCs for review and update.

A publication change package is included in a new contract or existing contractual vehicle, such as a task order, when a change is to be accomplished by a contractor.

2.1.2.2.1.3 Army - Develop TMs (A23).

TMs are developed by either government or contractor activities to meet Army requirements. TMs are written using existing technical data, LSA/LSAR data, publication change packages, and TM reference documents. Commercial manuals, if approved by the Army, may be supplied and supplemented as needed, in lieu of the development of new TMs. The MSC assigns each TM and change a unique number from a block of numbers obtained from MRSA IAW AR 25-30. The development of TMs is shown in Figure 2-10, Army - Develop TMs.

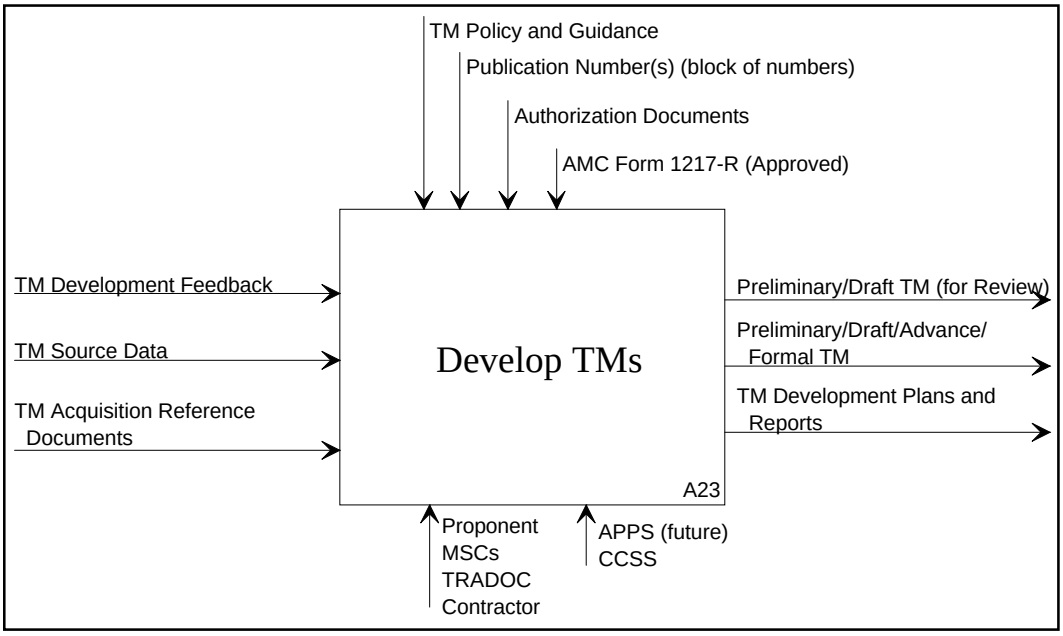

Figure 2-10, Army - Develop TMs

TMs will be validated by the developer (contractor or Army organization) to ensure they provide the user with technically accurate and readily understandable information. The developers will perform a reading grade level computation for all TMs. Validation is performed according to the developer prepared and government approved Validation Plan. Validated TMs are submitted to the Army for verification.

The developer submits draft TMs, plans, reports and schedules to the acquiring agency for review, approval/disapproval and comment, if any, as required by the development contract.

2.1.2.2.2 Current Army Organizations and Personnel Responsibilities.

a. MSCS:

1. Schedule the development and acquisition of TMs.

2. Develop, acquire, and maintain TMs.

3. Coordinate TM fieldings.

4. Coordinate and participate in TM validation and verification efforts.

5. Notify, in a timely manner, the Army EOD Detachment at Indian Head, MD of requirements to develop 60-Series Joint Service Non-Nuclear EOD TMs.

b. U.S. Army TRADOC:

1. Provides target audience description to TM developers.

2. Participates in TM verification efforts.

3. Reviews and provides revision comments and recommendations.

4. Provides subject matter experts (SME) in support of TM writing and acquisition.

2.1.2.2.3 Army Equipment.

a. Standard office automation equipment.

b. Logistics Planning and Requirements Simplification (LA)GPARS) system equipment (see Section 5 for details).

c. EPMS equipment (see Section 5 for details).

d. APPS equipment (see Section 5 for details).

e. CCSS (interface) equipment (see Section 5 for details).

f. Army Computer-aided Acquisition and Logistics Support (ACALS) (interface) equipment (see Section 5 for details).

g. Digital Storage and Retrieval Engineering Drawing System (DSREDS) (interface) equipment (see Section 5 for details).

2.1.2.2.4 Army Deficiencies.

a. The current system can not manage the acquisition of or acquire digital TM data for use.

b. The current system does not completely support efficient preparation of acquisition documents.

2.1.2.3 Improve TMs (A3).

2.1.2.3.1 Army Description.

TMs, because of errors, problems, improvements and

system/equipment modifications are updated/changed during their life cycle. Perceived deficiencies and recommended changes are documented and submitted for review, evaluation and incorporation if approved. This process is depicted in Figure 2-1, Army - Improve TMs. Evaluation, consisting of policy and procedure reviews or engineering/technical analyses, may result in either disapproval or generation of an official TM update. Updates may take the form of formal changes or revisions, and/or interim or formal operational or safety supplements.

Identification of problems, improvements, and deficiencies with TMs occurs through:

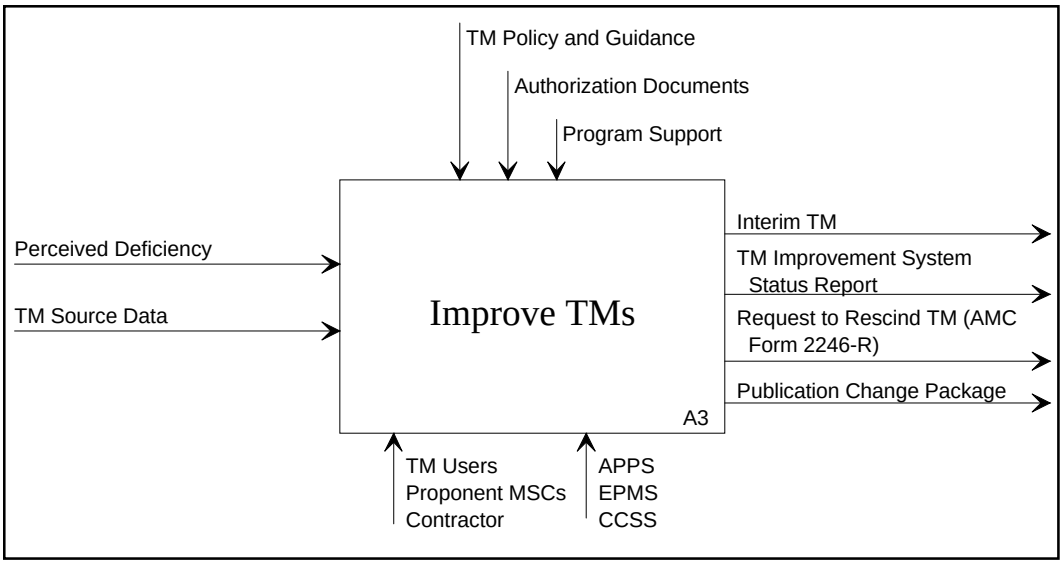

Figure 2-11, Army - Improve TMs

a. User submission of recommended changes using DA Form 2028.

b. Review of system/equipment/software changes (Engineering Change Proposals (ECP], Equipment Improvement Reports [EIR], and/or MWOS) which require modification (companion changes) to TMs.

c. Management identification of excessive TM recommended changes being submitted.

d. Periodic TM reviews.

e. Procurement of replacement parts or support equipment.

f. Change in operational requirements or maintenance concepts.

The TM improvement process manages TM updates through: initiation and identification of recommended changes; tracking and administrative reviews of recommendations; evaluation of problems and suggested corrective actions; and issuance of official TM update packages.

2.1.2.3.1.1 Army - Recommend Change (A31).

The change recommendation process allows the TM users or reviewers to identify problems and improvements. Any condition or perceived deficiency which requires a change to the technical content of a TM is submitted via letter, EIR, recommended change (DA Form 2028), etc., through established channels. These recommended changes may clarify data, correct data, or improve procedures, and may include one or more attachments (hand-written narrative, drawings, copies, or photographs) to identify or clarify the discrepancy. The function of recommend change is shown in Figure 2-12, Army - Recommend Change.

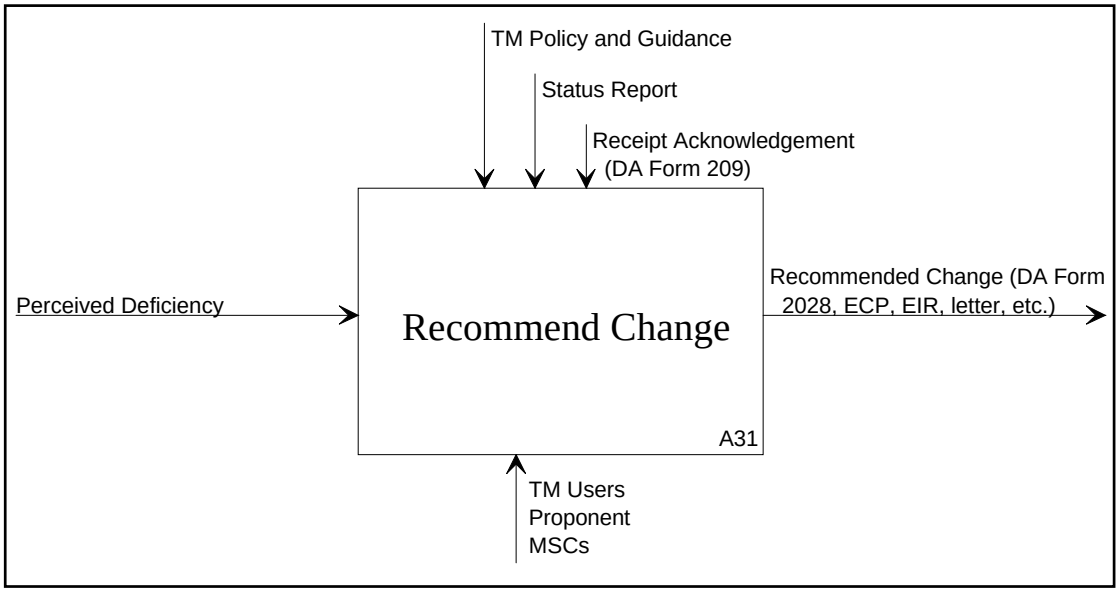

Figure 2-12, Army - Recommend Change

2.1.2.3.1.2 Army - Control TM Improvement System (A32).

The TM improvement system is managed to identify TM deficiencies, control and evaluate recommended changes, and

ensure timely and accurate publishing of resulting TM updates. This is accomplished through periodic TM reviews, review and evaluation of recommended changes, monitoring recommended change request progress, and management actions. The more serious the TM deficiency, the higher the category of the recommended change and the shorter the response time permitted. This process is depicted in Figure 2-13, Army - Control TM Improvement System.

Recommended changes are generated by individuals and submitted directly to the responsible TM proponent organization. The TM proponent organization manager performs an administrative review and forwards the recommended change to the technical content manager for evaluation, which may include engineering or contractor analysis, and approval. The TM proponent manager maintains records using various manual and automated systems to track recommended change request progress, status, and corrective actions, if any. Besides the obvious "approved" and "(disapproved", status can include "abeyance" (deferred for management review), "advisement" (pending engineering evaluation), "being evaluated" (at the evaluation agency), and "pending" (approved, publication delayed). Upon receipt of a recommended change, the proponent MSC forwards a Delay, Referral, or Follow-up Notice, DA Form 209, to the initiator. Status of the recommended change request is made available to the recommended change request initiator after it has been classified as Critical, Major or Other. An approved recommended change request will result in publication and distribution of an official change.

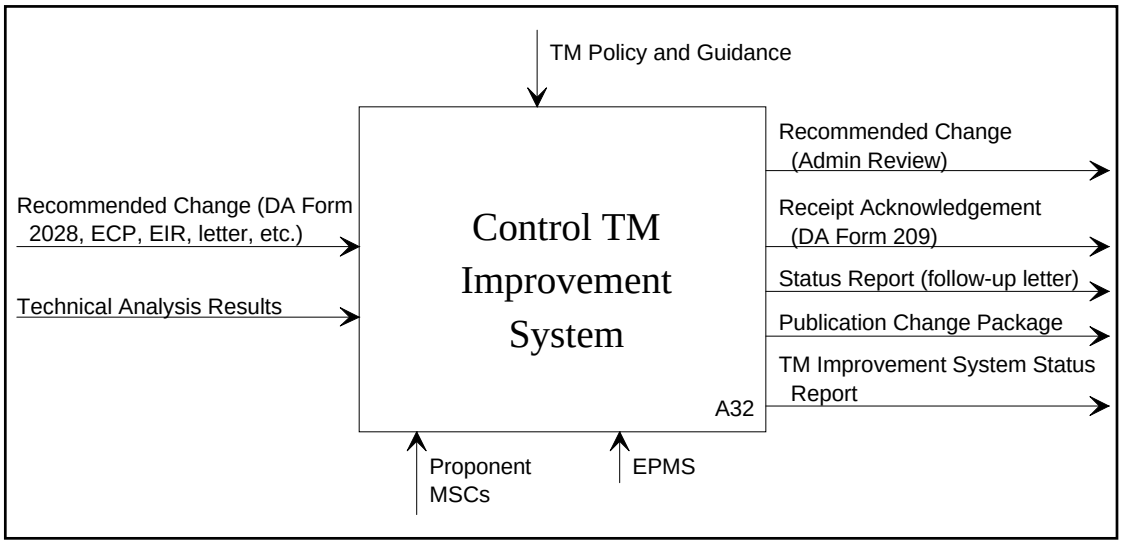

Figure 2-13, Army - Control TM Improvement System

A Publication Change Package (PCP) consists of one or more approved changes and any associated technical analyses and supporting materials used by the organic or contractor writer/editor to actually make the change to the TM. The MSC assigns the appropriate publication number extension identifying the change when the PCP is assembled.

TM improvement system status reports are used internally by each MSC in order to prioritize the processing of TM changes.

TM improvement reports are classified as Critical, Major or Other.

a. CRITICAL: This classification requires immediate action on a TM deficiency which, if not connected, would result in fatal or serious injury to personnel, extensive damage or destruction to equipment or property, or inability to achieve or maintain operational posture (MISSION ESSENTIAL). AVSCOM Safety of Flight reports fall into this class.

b. MAJOR: This classification requires action on a TM deficiency involving a hazardous condition which, if not corrected, could: result in personal injury and/or damage of equipment or property; reduce operational efficiency; or jeopardize the safety or success of mission accomplishment.

c. OTHER: This classification requires action on TM deficiencies which do not fall into one of the above categories.

The proponent MSC administrative review process ensures recommended changes are properly routed and controlled, coordination is completed at the appropriate levels, entries are correct, and the recommended change is properly tracked. The resulting notice is generated to alert the proponent MSC office or individual that the recommended change has been received, is entered in the tracking system, and that a control number has been assigned.

TM deficiencies and/or improvement reports on 60-Series Non-Nuclear EOD TMs are submitted by EOD personnel directly to the Army Technical Detachment at Indian Head, MD, who screens the reports for accuracy, duplication and joint service application before forwarding to the Navy for acceptance and project initiation. Tracking, control, status and final disposition of these reports is provided by the Army Technical Detachment at Indian Head, MD.

AMCCOM’s facility at Picatinny Arsenal, NJ, receives recommended changes related to Army nuclear weapons and conventional ammunition manuals on DA Form 2028. A separate DA

Form 2028 control and manual update system is used and a monthly 2028 status report is provided to AMCCOM headquarters. For nuclear weapons manuals, high priority electrical message changes may be transmitted to all users of the nuclear weapons manual.

2.1.2.3.1.3 Army - Perform Technical Content Analysis (A33).

After initial administrative reviews, change recommendations are sent to technical content managers or specially constituted review boards for a technical evaluation, if required. The technical evaluation may include engineering analysis by connector personnel. The result of the evaluation may be disapproval, approval with modifications, or approval as written, and (for "critical" and "major" classifications) may include a recommendation to upgrade or downgrade the recommended priority. This process is shown in Figure 2-14, Army - Perform Technical Content Analysis.

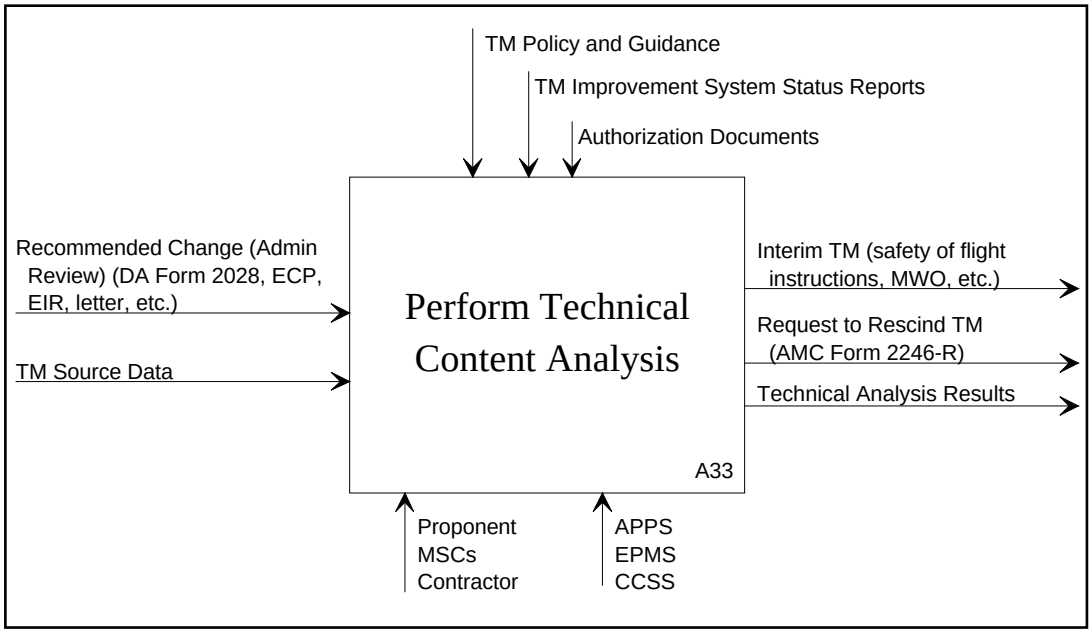

Figure 2-14, Army - Perform Technical Content Analysis

Any delays caused by the evaluation process must be reported to the initiator through the status reporting system. Delays include reviews by special management agencies, engineering analysis, contractor review, publishing delays, etc.

When the evaluation determines that the recommended change is valid, the corrective action is finalized, and an official TM

change will be generated. The TM change may be prepared organically or by a contractor under government direction.

All recommended changes will be evaluated for impact on other TMs. Where such impacts exist, companion changes or source data to change other affected TMs will be prepared.

Ms will be rescinded when appropriate.

2.1.2.3.2 Current Army Organizations and Personnel Responsibilities.

a. MSCS:

1. Provide replies to users' DA Form 2028 submissions, receipts for, and status reports on TM change recommendations.

2. Operate and maintain the TM Improvement Reporting System for designated TMs.

b. TM Users:

Submit change recommendations directly to the appropriate TM proponent.

2.1.2.3.3 Army Equipment.

a. Standard office automation systems.

b. EPMS equipment (see Section 5 for details).

c. APPS equipment (see Section 5 for details).

d. CCSS (interface) equipment (see Section 5 for details).

e. ACALS (interface) equipment (see Section 5 for details).

f. DSREDS (interface) equipment (see Section 5 for details).

2.1.2.3.4 Army Deficiencies.

a. TM update processes are very time consuming and labor intensive.

b. Routine changes are not incorporated into the TMs on a timely basis.

c. Standard changes affecting several TMs are not always

simultaneously effected.

2.1.2.4 Publish TMs (A4).

2.1.2.4.1 Army Description.

Publication of TMs is accomplished through USAPPC during the acquisition and improvement process. USAPPC will procure the Govemment Printing Office (GPO) support required to reproduce the TM.

The publishing of TMs is depicted in Figure 2-15, Army - Publish TMs. TMs, TM Index Updates and changes to publications are prepared as a reproducible master and incorporated into a reproduction package. The printer reproduces the TM as prescribed by the directions received in the reproduction package. Published TMs are shipped to the USAPPC St Louis PDC or directly to users as initial distribution. When the reproduction is completed, the reproducible master is returned to the proponent MSC.

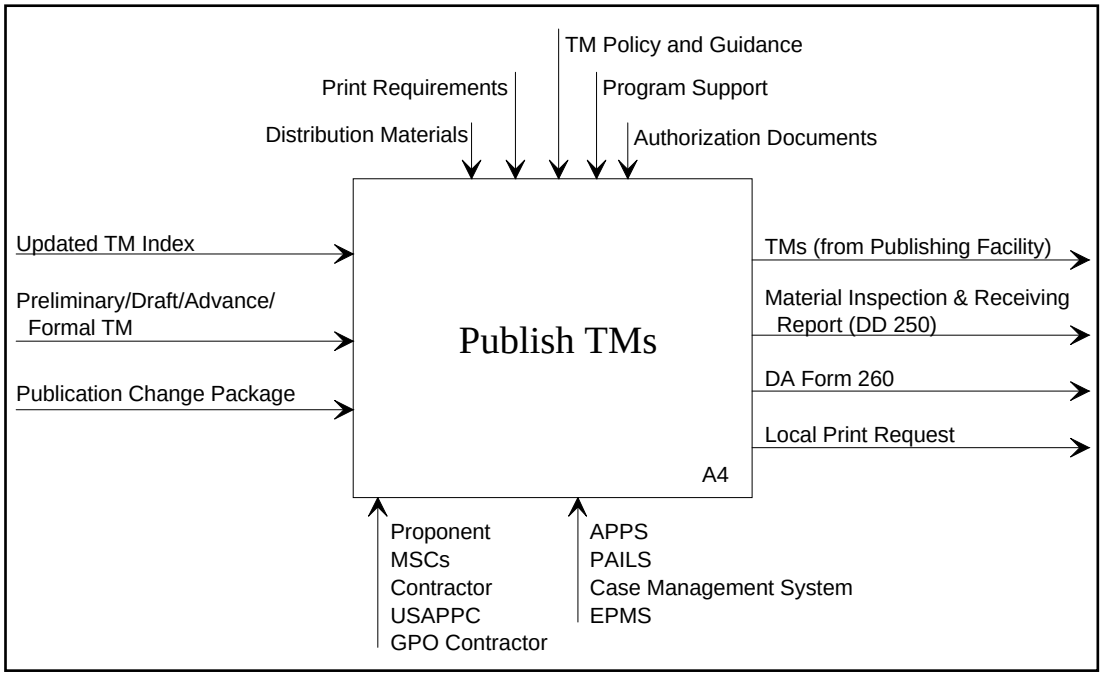

Figure 2-15, Army - Publish TMs

All Army nuclear weapons publications are printed by FCDNA. For unclassified manuals, USAPPC provides shipping labels and

FCDNA makes initial distribution and forwards shelf stock to St Louis PDC. For classified manuals, FCDNA bulk ships to St Louis PDC. FCDNA retains their shelf stock and distributes to the Navy, Air Force, FCDNA, and SNL as determined from FCDNA Form 7, Publications Requirements Table.

2.1.2.4.1.1 Army - Develop TM Reproducible Master (A41).

Data received for publication (updated TM indexes, TMs, approved TM change recommendations [DA Form 2028]) are formatted into a reproducible master by MSC or by a contractor. If the source data is currently m paper format, the material may have to be digitized so it can be worked using automated capabilities. If the source material is in a digital format, i.e., various proprietary word processor formats, ASCH files, etc., it may have to be reformatted for Standard Generalized Markup Language (SGML) tagging added for use on automated components. If automated means are not available, the Reproducible Master is created using a manual cut-and-paste method.

The reproducible master may consist of a camera-ready copy, negatives, and/or digital media. The reproducible master will receive a publication review for format, punctuation, and editorial accuracy. Once approved, it will be incorporated into a reproduction package. This process is depicted in Figure 2-16, Army - Develop TM Reproducible Master.

MRSA prepares masters for USAPPC use in publishing DA Pamphlet 25-33.

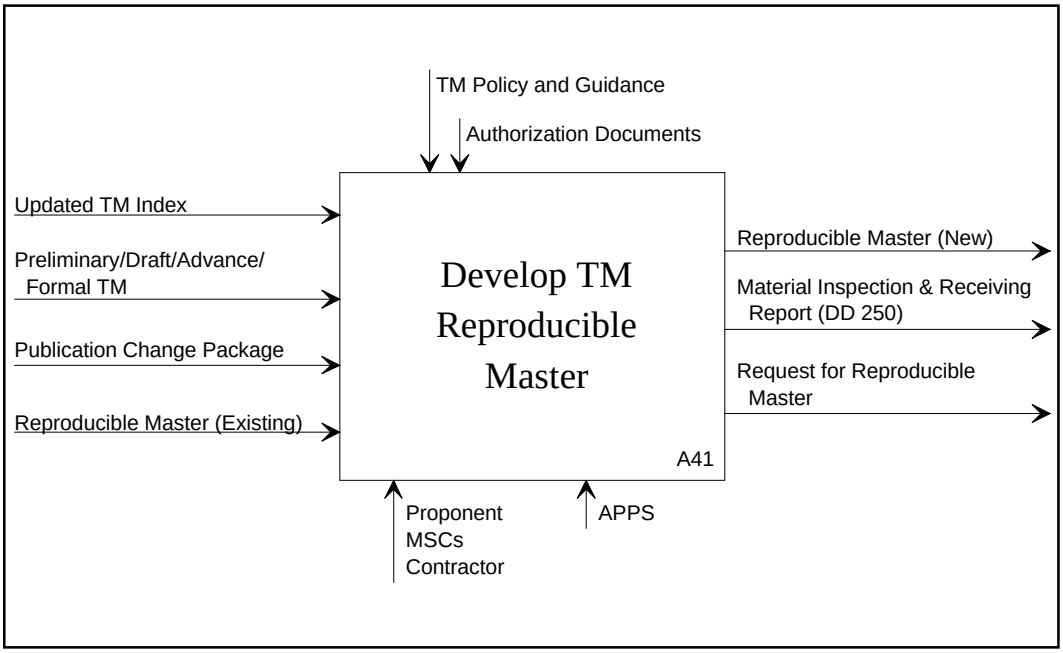

Figure 2-16, Army - Develop TM Reproducible Master

2.1.2.4.1.2 Army - Prepare Reproduction Package (A42).

To reproduce a TM, the MSC prepares a Running Sheet and a Requisition for Printing and Binding Services (DA Form 260) and sends them to USAPPC for approval. Proponents provide distribution instructions on the DA Form 260 which includes density of equipment, contractor overpack requirements, service school requirements, and DA 12-series form and block number assigned 18 months prior to the request for printing. Upon approval of the print request, USAPPC obligates funding, prepares the shipping instructions (DAAG Form 314), the Print Order (GPO Form 251 1), and the TM Authentication Page, and sends the package to the proponent MSC. The MSC completes the reproduction package by adding reproducible masters and sends it to the GPO printer. This function is depicted in Figure 2-17, Army - Prepare Reproduction Package.

A test program featuring decentralized printing procurement by the MSCs is currently underway. In the decentralized mode, the participating MSCs procure printing directly through their supporting printing plants. A record copy of DA Form 260 is sent to USAPPC.

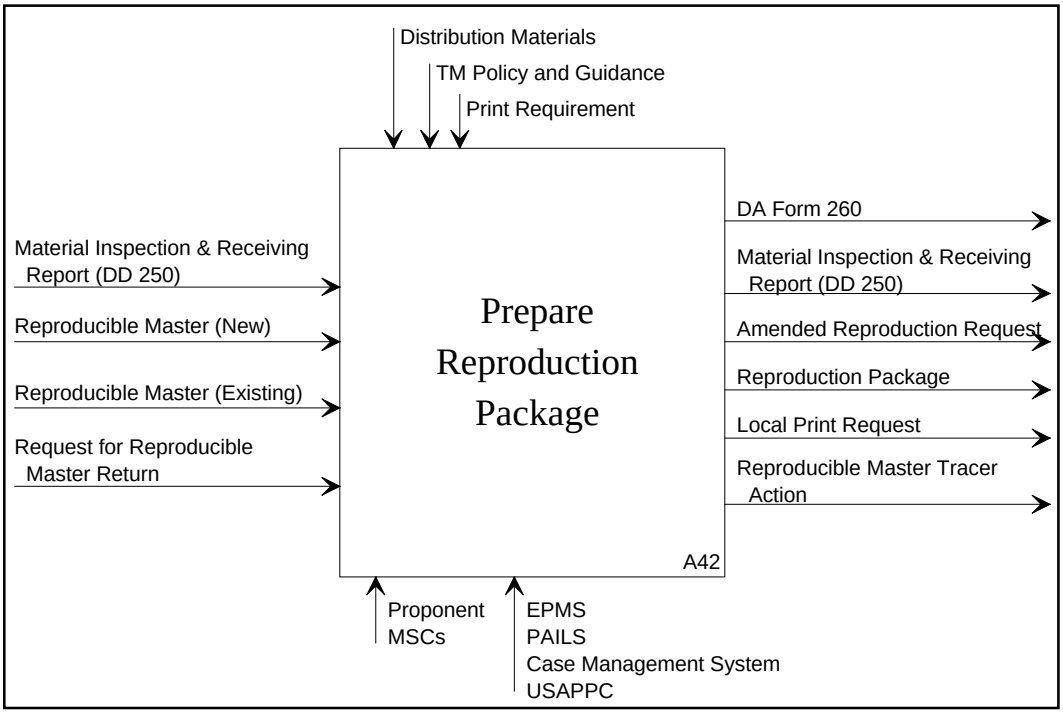

Figure 2-17, Army - Prepare Reproduction Package

Print orders are prepared by or coordinated through USAPPC. USAPPC also decides on print quantity and whether initial distribution is to be done by the printer or one of USAPPCs PDCS. If the printer is to be directed to make initial distribution, USAPPC will extract requirements data from the ID Requirements System, have distribution labels printed, and maA the distribution materials to the printer. The excess stock, normally consisting of a twelve-month replacement stock, is shipped by the printer to the appropriate PDC. When a PDC is to make initial distribution, all copies of the publication are sent to the PDC which prepares distribution labels and ships the publication. Residual stock is retained for replacement copy distribution requirements.

Contractor prepared TM reproduction masters are inspected and accepted before being included in the reproduction package.

If the masters are developed by a contractor, the contractor will include a Material Inspection and Receiving Report (DD Form 250) in the delivery. The responsible MSC TM manager will sign and forward it to the contracting office to signify acceptance of the masters.

If the control function requests the return of a reproducible master(s) that has been sent to the preparer of the

reproduction package, the preparer can initiate tracer action to the publishing facility to determine the location, status, schedule for return, etc., of the reproducible master(s). USAPPC control of the reproduction process is accomplished using PAILS and Case Management Systems.

Reproduction packages for Army nuclear weapons manuals are forwarded directly to FCDNA for printing.

2.1.2.4.1.3 Army - Reproduce TMs (A43).

TMs are reproduced by the Army or by a GPO contractor in sufficient quantities to meet Army requirements (including SAP). If local reproduction authority (LRA) is granted, the proponent MSC prints the publication. The reproduction facility accomplishes reproduction and performs initial distribution as directed by USAPPC in the reproduction package. This process can start at the printer or at the PDC upon receipt of initial stock. This process is shown in Figure 2-18, Amy - Reproduce TMs.

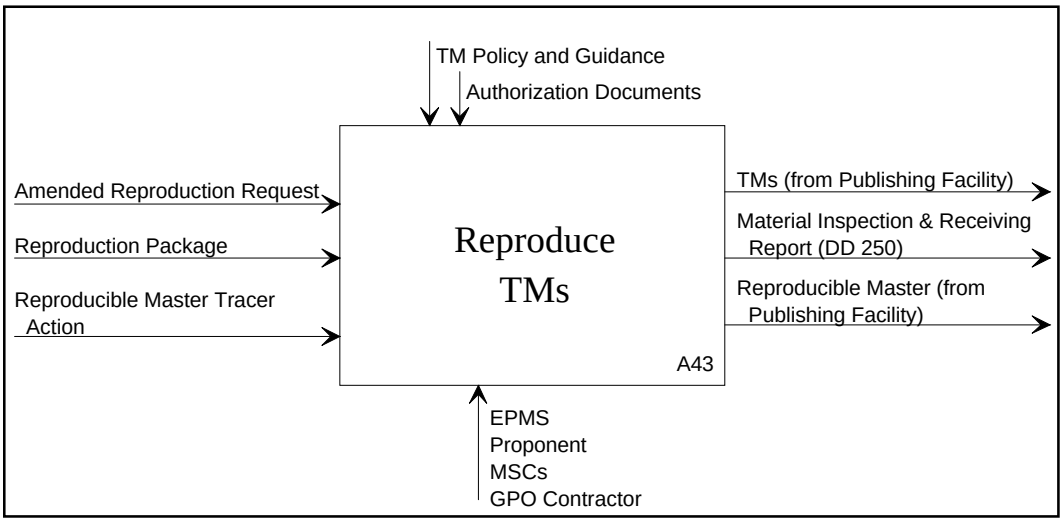

Figure 2-18, Army - Reproduce TMs

The proponent, the USAPPC St Louis PDC, or the printer will ship the publication. Normally, TMs in excess of initial distribution requirements are stocked in the USAPPC St Louis PDC. When the reproduction is completed the Reproducible Master is returned to the responsible MSC organization. HQ USAMC programs and funds printing costs for all TMs.

2.1.2.4.1.4 Army - Control Reproducible Material (A44).

Reproducible material for TMs is stored by the MSC. Reproducible material for SKO Supply Catalogs is stored by USAMC CDA on the SKO Supply Catalog Publication Data Base. Negatives, artwork and reproducible copy are stored by TM number and in a manner to avoid damage to the material. Classified material is stored according to AR 380-380. Negatives may also be stored by GPO or the St Louis PDC (for classified). This process is depicted in Figure 2-19, Army - Control Reproducible Material.

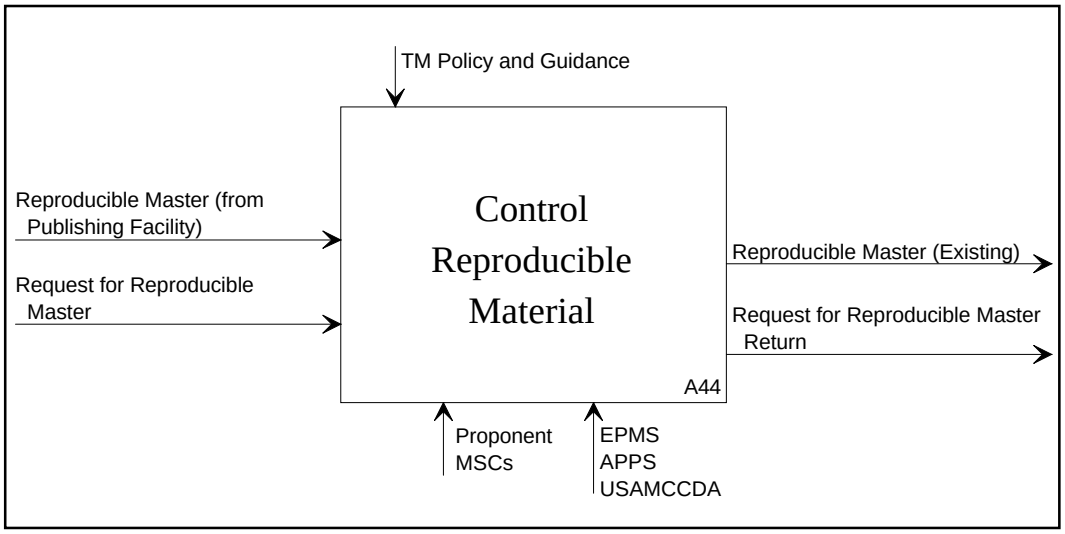

Figure 2-19, Army - Control Reproducible Material

A Reproduction Copy/Negative Control file is maintained for the reproducible material being stored and a locator record is maintained for each TM. The record is filed by TM number and shows the physical location of the reproducible material. Some MSCs have automated the Reproduction Copy/Negative Control File process. When reproducible material is shipped to an Army activity or government contract facility, the date of shipment and name of recipient are entered into the record by the proponent MSC. When reproducible material is removed from storage, the name and office symbol code of the recipient are entered. When reproducible material is returned for storage, it is checked for completeness, location information is updated, and the material is placed in its designated location.

2.1.2.4.2 Current Army Organizations and Personnel Responsibilities.

a. MSCS:

1. Comply with publishing and printing policies.

2. Prepare requests for printing and send reproduction packages to printers.

3. Manage and control TM reproducible master files.

b. USAPPC:

1. Processes print orders.

2. Determines the number of copies to be printed to satisfy known distribution demands.

c. USAMC CDA:

1. Complies with publishing and printing policies.

2. Prepares requests for printing and sends reproduction packages to USAPPC.

3. Manages and controls SKO Supply Catalog Publication Data Base.

4. Manages and controls SKO Supply Catalog reproducible master files.

2.1.2.4.3 Army Equipment.

a. Standard office automation systems.

b. APPS equipment (see Section 5 for details).

c. PAILS equipment (see Section 5 for details).

d. Case Management System equipment (see Section 5 for details).

e. EPMS equipment (see Section 5 for details.

2.1.2.4.4 Army Deficiencies.

a. Delays between preparation of reproducible copy and distribution to users are excessive.

b. Delays and difficulties in identifying and correcting reproduction effort are excessive.

c. The current system does not support reduction of paper products.

d. Storage charges for reproducible masters are excessive.

2.1.2.5 Manage Publications Inventory (A5).

2.1.2.5.1 Army Description.

The USAPPC PDCs ensure that sufficient copies of DA-authenticated publications are printed to meet Army initial distribution and subsequent replacement copy distribution requirements. The MSCs ensure that command TMs (MWOS, DMWRS, etc.) are stocked in sufficient quantities to meet Army needs. Acquisition agencies may stock advance TMs for distribution as necessary prior to formalization. The USAPPC provides automated support for publication inventory management functions through various system applications known as the Standard Army Publications System (STARPUBS). These inventory management functions are shown in Figure 2-20, Army - Manage Publications Inventory

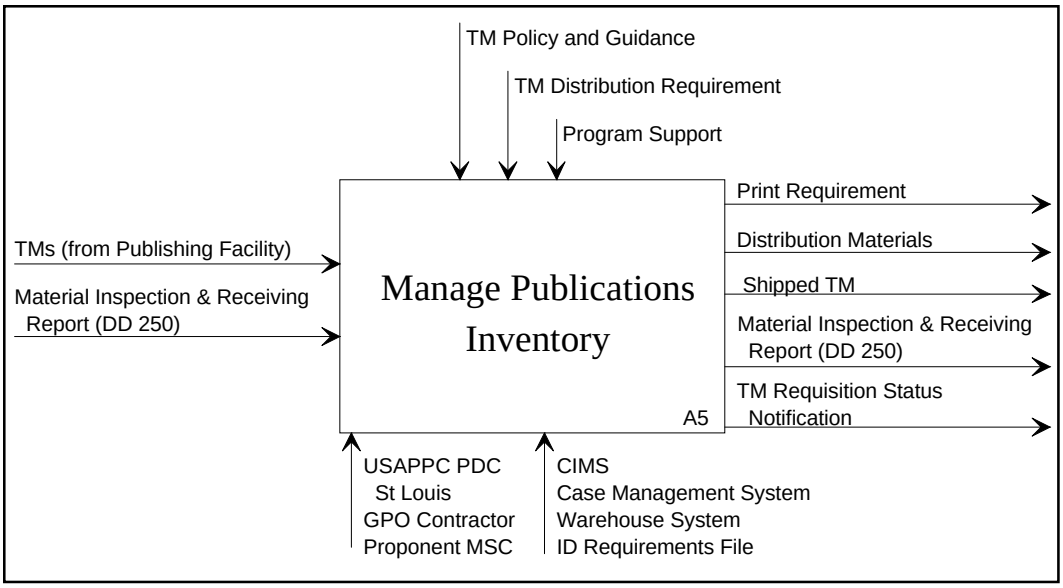

Figure 2-20, Army - Manage Publications Inventory

The USAPPC FMS Backorder System Supports SAP requisitioning,

request document review, issue, and billing.

2.1.2.5.1.1 Army - Publication Stock Control (A51).

The publications inventory is controlled by USAPPC through its PDCS. This process is shown in Figure 2-21, Army - Publication Stock Control.

The quantity of TMs to be published is determined by USAPPC. USAPPC extracts quantities from the initial distribution requirements file submitted by publication account holders. This quantity is combined with contractor overpack quantities, school quantities, and special distributions to determine initial distribution requirements. Using this total, USAPPC determines an initial stockage requirement for the USAPDC to cover resupply needs during the next year. The initial distribution requirements are then added to the stockage quantity to determine the total TM requirements. Proponent MSCs will determine TM requirements for command-level and locally produced publications.

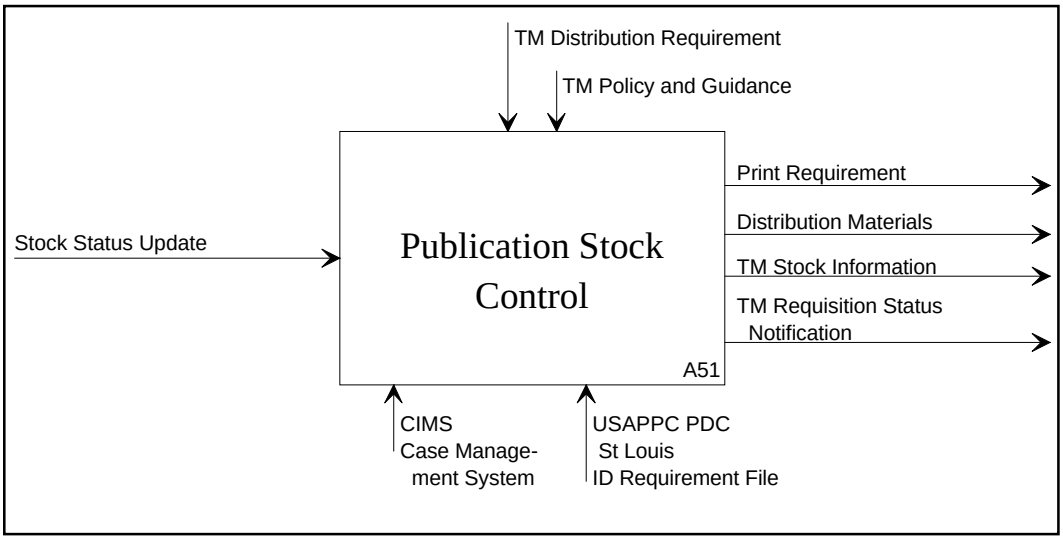

Figure 2-21, Army - Publication Stock Control

The reorder point of new publications is manually set as one-half the stock available for replacement copy distribution. The Master Inventory File is established using this reorder point enabling the automation of the Demand Processing System to take over and begin processing requests for the publications and recording these demands in the Master Inventory File (MIF). After nine months of data, the publication

is initialized and the Computerized Inventory Management System (CIMS) automatically calculates the straight-line forecast quantity. Then based on this quantity, the reorder point and reorder quantities are determined. Further, this forecast is compared to actual demand history to alter the forecast model.

Should the requisitions for a publication be greater than expected and the stock is depleted, a backorder notification is automatically generated and sent to the originator. As part of the CIMS, the MIF is established using this reorder point enabling the automation of the Demand Processing subsystem to take over and begin processing requests for the publications and recording these demands in the MIF. The PDC manager identifies those basic and change portions of the publication that are to be consolidated before the publication is reprinted. The MSC publication manager indicates whether the material will remain current during the reprint period and, if applicable, provides the reproducible master to USAPPC for inclusion in the reproduction package. Upon receipt of the approval to reprint the publication, the PDC will update the Case Management System and forward the reprint request to USAPPC. The PDC will also update the Case Management System to reflect receipt of and closure of print orders.

2.1.2.5.1.2 Army - Store/Issue Publications (A52).

The USAPPC PDCs receive initial stockage of publications after the completion of initial distribution of a new publication and as reorder stockage for existing publications. The stockage level is determined by USAPPC and is normally estimated to cover contractor overpack, total package Geldings, SAP, and Army replacement copy requirements forecast for one year. The process of storing publication is shown in Figure 2-22, Army Store/Issue Publications.

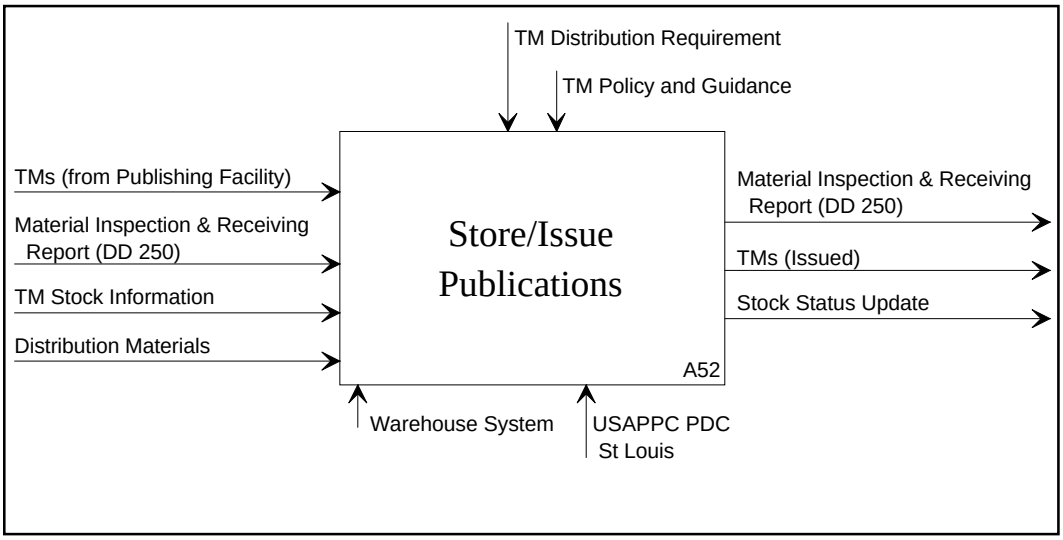

Figure 2-22, Army - Store/Issue Publications

At the St Louis PDC, the loose issue location is obtained from the Bin/Rack file system. The warehouse control system assigns and records bulk locations only. The Bin/Rack location is recorded in the Master Inventory File so that the demand processing system can identify where to route the pick document for a customer demand.

At the Baltimore PDC, the bulk, pallet, or bin location is assigned and recorded in the Warehouse Control System. The quantity, but not the location, is recorded in the Master Inventory File so that the demand processing system is activated for demand calculations and stock records. AU location data is maintained in the Warehouse Control System.

MRSA notifies USAPPC when a publication is replaced or totally rescinded. When the USAPPC PDC receives the notice in DA PAM 25-30 that a publication is obsolete, it salvages any remaining stock of the replaced or rescinded publication, ensuring destruction in accordance with pertinent DoD and Army regulations.

Upon receipt of inventory shipping instructions, TMs are pulled for issue. CIMS records the issue and decrements the on-hand stock balance quantity information. It then passes the demand to the CRAM, the demand history file. CRAM records the demand and the quantity requested. In the case of SAP requests, the Backorder System is used to track their documents by document number.

2.1.2.5.1.3 Army - Ship TMs (A53).

Picked TMs are put into shipping containers (envelopes, boxes, etc.), affixed with labels, and consolidated by weight, bulk and destination into an appropriate shipping mode. The TMs are then turned over to the selected shipper [United Parcel Service (UPS), U.S. Postal Service (USPS), common carrier, etc.] for delivery to publications accounts for subsequent distribution to users. HQ USAMC programs and funds mailing costs for all TMs. Expenditures of printing and mailing funds are tracked by both HQ USAPPC and the proponent MSC. This process is depicted in Figure 2-23, Army - Ship TMs.

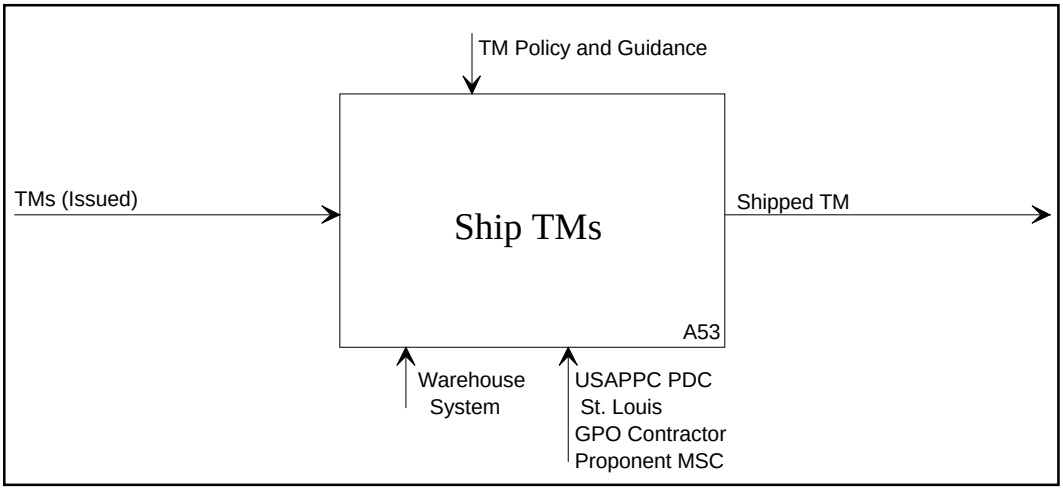

Figure 2-23, Army - Ship TMs

MSCs control, stock and issue command-authenticated TMs (MWOS, DMWRS, etc.) using information maintained at the MSC.

Classified TMs are stored, handled, tracked, and mailed separately using the USPS Registered Mail receipt process. Note that GPO contractors often make initial distribution in accordance with the instructions provided on the DAAG Form 314 included in the reproduction package.

2.1.2.5.2 Current Army Organizations and Personnel Responsibilities.

a. USAPPC:

1. Provides inventory management of publications.

2. Receives, stores, issues, and ships TMs.

b. MSCS:

Receive, store, issue, and ship command-authenticated TMs.

2.1.2.5.3 Army Equipment.

a. Standard office automation systems.

b. CIMS equipment (see Section 5 for details).

c. Case Management System equipment (see Section 5 for details).

d. Warehouse System equipment (see Section 5 for details).

e. ACALS (interface) equipment (see Section 5 for details).

f. ID Requirements File equipment (see Section 5 for details).

2.1.2.5.4 Army Deficiencies.

a. Space required for storage of TMs is excessive.

b. Mislocation of TMs leads to invalid inventories.

c. TM changes, in most cases, are not stored with the basic TM. This causes distribution problems.

d. Storage facilities do not always provide adequate environmental protection.

e. Inadequate storage causes loss of quality of master reference copy for some TMs.

f. Warehousing and shipping functions require excessive manpower.

2.1.2.6 Distribute TMs (A6).

2.1.2.6.1 Army Description.

USAPPC is responsible for the systems, collectively called STARPUBS, which control the distribution of Army publications. These systems can be grouped by type of distribution. One group consists of those systems used for initial distribution and the other group of those systems used for replacement copies. Initial distribution uses the Standard

Single Account File (SSAF), the ID Requirements File, and the ID Nomenclature File. Replacement copy uses the SSAF, AUTODIN, MIF, CIMS, FMS Backorder, and the CRAM history file. In addition to these requirements, MSC proponents, because they manage the control and development of TMs, may identify special ID requirements.

MSCs control, stock, and issue command authenticated TMs using information maintained at the MSC. The distribution process is depicted in Figure 2-24, Army - Distribute TMs.

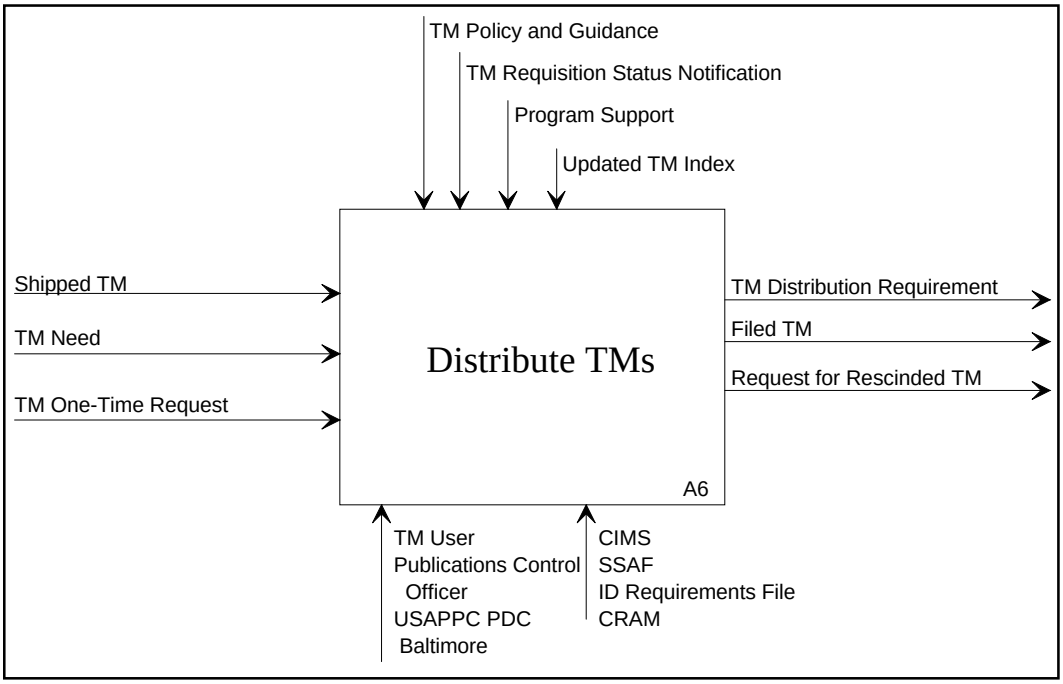

Figure 2-24, Army - Distribute TMs

The distribution of explosive ordnance and nuclear weapons publication is strictly controlled.

2.1.2.6.1.1 Army - Request or Change TM Account Information (A61).

Publications are not normally distributed by USAPPC PDCs to actual publication users. Instead, distribution is to publication accounts normally established at the battalion or company level. In addition to the Army agencies, other government and non-govemment activities may want initial distribution or replacement copy support for DA-authenticated

publications. All requests for a publication account must be submitted using DA Form 12-R. Establishment of a publications account enables the account holder to, requisition publications. This function is depicted in Figure 2-25, Army - Request or Change TM Account Information.

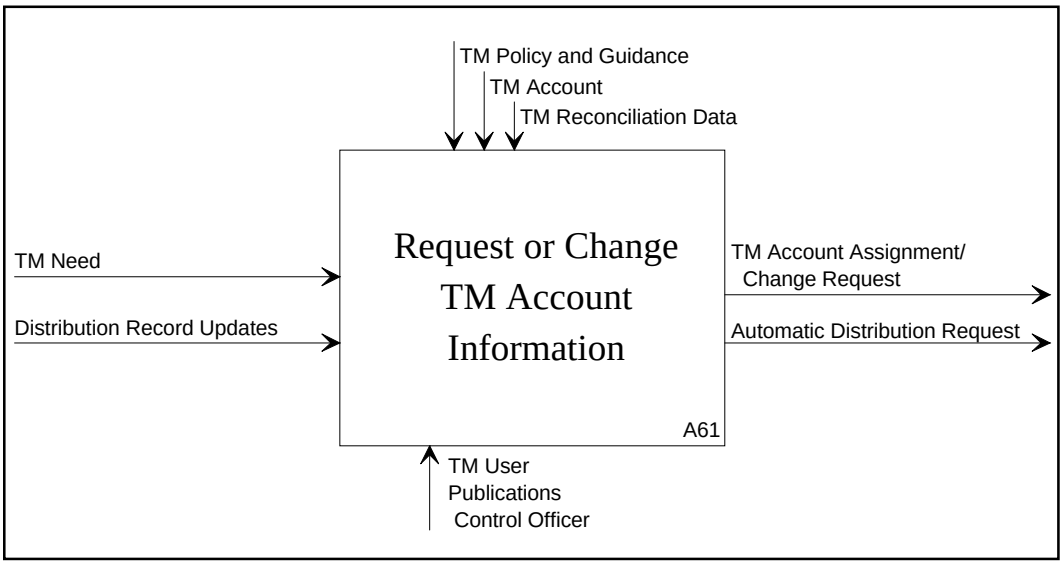

Figure 2-25, Army - Request or Change TM Account Information

The U.S. Army Security Affairs Command (USASAC) is authorized publication accounts to support a SAP agreement established by an implemented DD Form 1513, Letter of Offer and Acceptance. Requests to establish SAP are submitted on APDC-B Form 42.

Publication accounts needed by contractors to meet Army contracts can be requested by submitting a DA Form 4790-R, Certification for Distribution of Publications, attached to the DA Form 12-R.

2.1.2.6.1.2 Army - Control TM Distribution Requirements (A62). (A62).

Information relative to approved publication accounts is contained in the SSAF. This file contains information about the unit/activity that requested the account and the level of types of publications authorized. Once a publication account is established in the SSAF, publication ID requirements are submitted to USAPPC using DA 12-series forms or DA Form 12-99 IAW

DA PAM 25-33. USAPPC reviews requests ensuring that each request has been approved by the installation Publication Control Officer or the activity Director of Information Management (DOIM). Validated publication requirements are then processed into the ID Requirements File. This is shown in Figure 2-26, Army - Control TM Distribution Requirements.

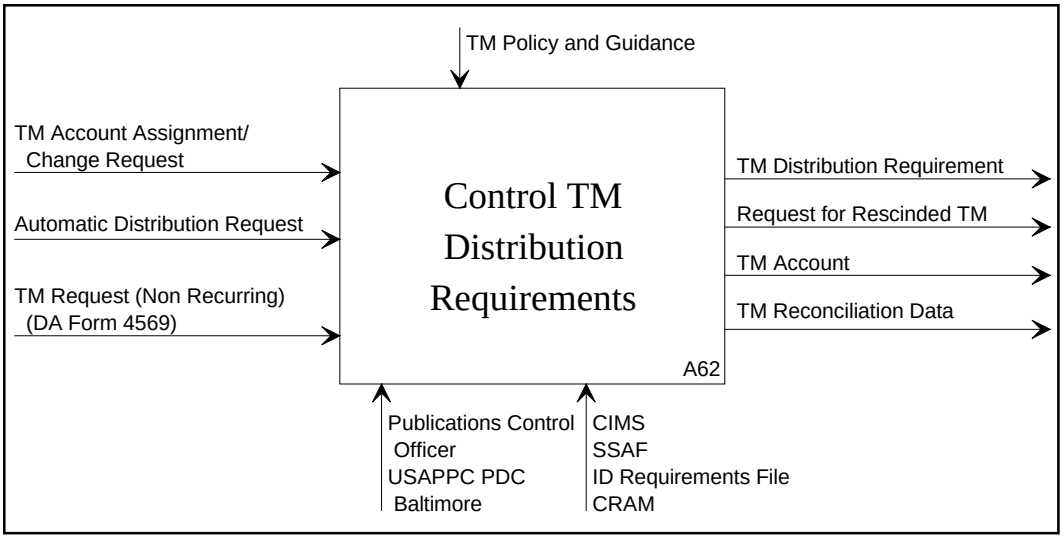

Figure 2-26, Army - Control TM Distribution Requirements

EOD Managers forward their ID requirements directly to the U.S. Army Technical Detachment, Indian Head, MD who approves/disapproves these requests.

Nuclear weapons managers forward their ID requirements directly to the U.S. Army Nuclear and Chemical Agency, Springfield, VA, who approves/disapproves these requests.

Requisitions (DA Form 4569 or 4569-1-R) are received from publication account holders. These requisitions are received either by mail or AUTODIN. Once received, requisitions are transcribed to magnetic tape from data entry. These requisitions are input to the daily demand processing cycle.

2.1.2.6.1.3 Army - Create Replacement TM Requirement (A63).

Requisitions (DA Form 4569 and 4569-1-R) for publications can occur as a result of a publication one-time request or as a result of a review indicating a shortage in the number of publications on hand at an account versus their justified need.

Requisitions are processed through die demand processing cycle. This process is shown in Figure 2-27, Army - Create Replacement TM Requirement.

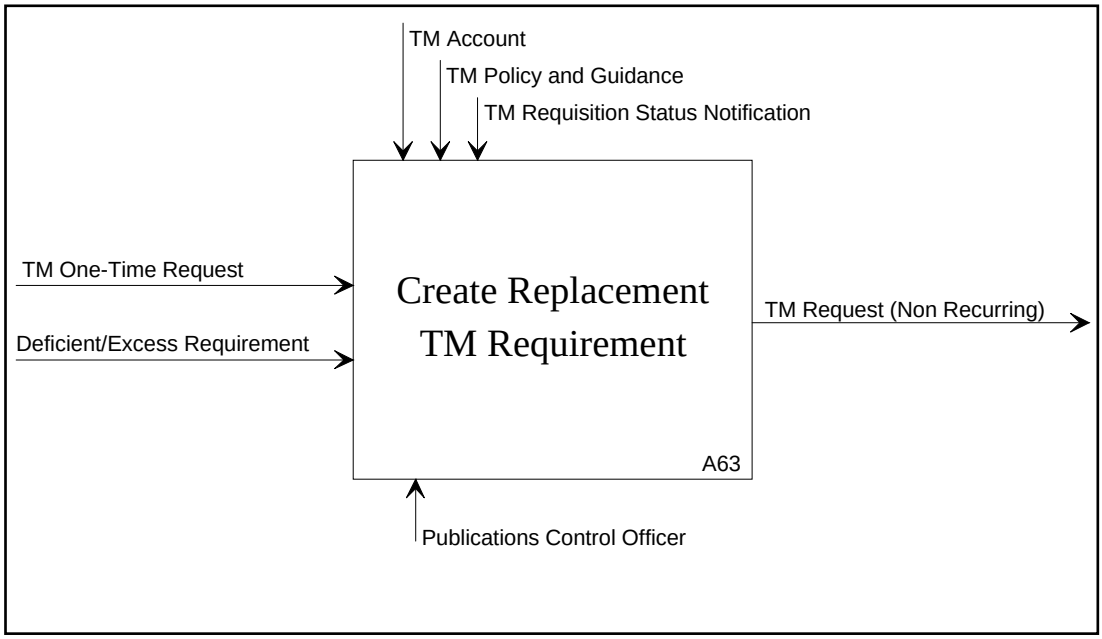

Figure 2-27, Army - Create Replacement TM Requirement

DA Form 4569s for EOD publications and Nuclear Weapons Publications are forwarded to the U.S. Army Technical Detachment, Indian Head, Md and to the U.S. Army Nuclear and Chemical Agency, Springfield, VA who respectively approve/disapprove these requests.

The 60-Series Non-Nuclear EOD Publications are issued only to Army personnel on a complete set basis: each set contains one copy of each TM listed for Army use in the 60-Series Non-Nuclear Index. SAP processing of requests for release of 60-Series Non-Nuclear TMs is the responsibility of the Navy.

2.1.2.6.1.4 Army - Make TM Distribution (A64).

The publication account holders receive both initial and replacement copy distribution. Based upon their publication distribution records, the publication account holders make distribution to the users in their unit/activity is accordance with DA PAM 25-33. This process is shown in Figure 2-28, Army - Make TM Distribution.

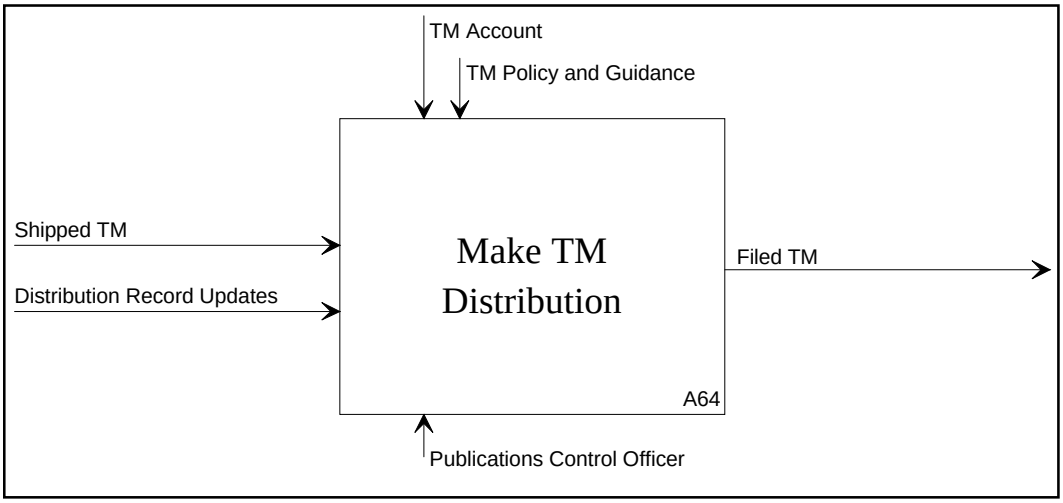

Figure 2-28, Army - Make TM Distribution

2.1.2.6.1.5 Army - Perform Periodic Reviews (A65).

Per AR 25-30, periodic reviews are conducted at least annually to ensure distribution requirements are current. Deficiencies or excesses in the account are corrected using DA Form 4569 if stockage is insufficient and DA 12-series forms if authorization levels are insufficient. This process is shown in Figure 2-29, Army - Perform Periodic Reviews.

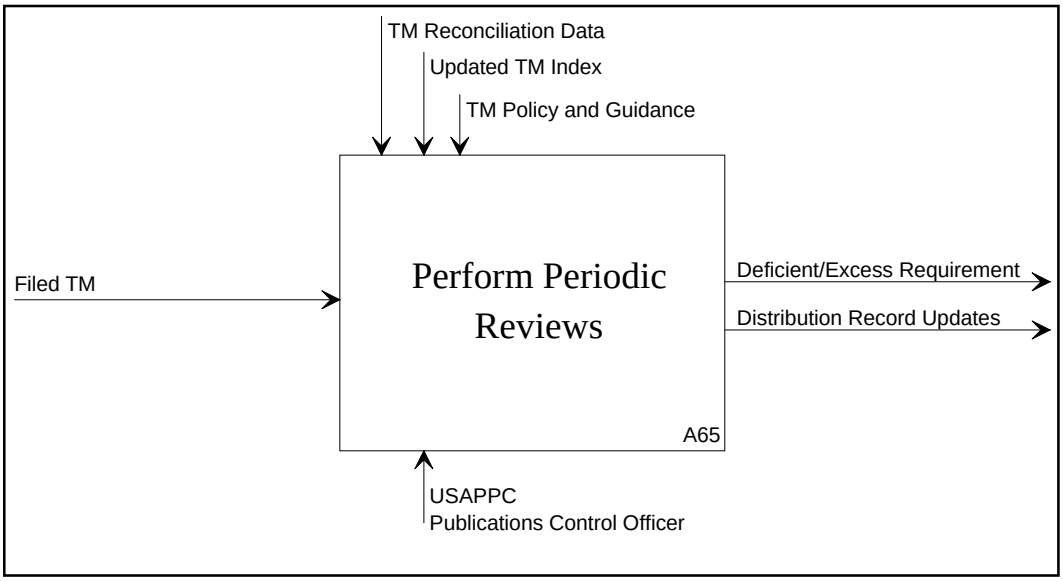

Figure 2-29, Army - Perform Periodic Reviews

2.1.2.6.2 Current Army Organizations and Personnel Responsibilities.

a. USAPPC:

1. Manages the Army's Publications Distribution System.

2. Distributes Army-wide technical publications.

3. Manages initial distribution of technical publications.

b. TM Users:

1. Requisition TMs.

2. Submit initial distribution requirements.

3. Maintain publications accounts.

c. Publications Control Officer:

1. Reviews, approves and forwards initial distribution requirements.

2. Receives and redistributes TMs to users.

3. Conducts periodic account reviews.

2.1.2.6.3 Army Equipment.

a. Standard office automation systems.

b. CIMS equipment (see Section 5 for details).

c. SSAF equipment (see Section 5 for details).

d. ID Requirements File equipment (see Section 5 for details).

e. CRAM equipment (see Section 5 for details).

2.1.2.6.4 Army Deficiencies.

a. The manual distribution process does not support timely response to distribution requirements.

b. Requisition processing errors result in excessive efforts to re-establish requirements and in duplicated requirements.

c. Labeling and address errors result in misrouted TM shipments.

d. Costs and labor associated with manual processes are excessive.

e. The existing system does not support automated screening of distribution requests using existing information.

f. Warehouse stock wastage is excessive under the current system.

g. The current system does not automate TM sales of Freedom of Information Action release process.

h. The current system does not handle digital TMs.

i. Cost accounting is not automated in the current system. Remainder of page intentionally left blank.

2.2 NAVY.

2.2.1 Navy Background.

The Naval Materiel Command (NMC) was previously designated as the centralized manager for the Navy Technical Manual Program. In 1984, the Naval Inspector General reported problems with the Navy technical manual (TM) program, and made recommendations for improvements. The Secretary of the Navy (SECNAV) established the Navy Technical Manual Management Policy Council and Navy Technical Manual Technical Council, under the leadership of the Chief of the Naval Material Command (NAVMAT), to oversee the Navy's technical manual improvement efforts.

On 6 May 1985, the NMC was disestablished. SECNAV Instruction 5219.2A required centralized management of Navy technical manuals at the Systems Command (SYSCOM) level to ensure that TMs are under management control at all times. SYSCOMs are responsible for planning (including budgeting), acquisition and updating; standardization, quality assurance, and acceptance of deliverables; reproduction, distribution, stocking and monitoring of technical manuals under their cognizance. To promote standardization, the Naval Air Systems Command (NAVAIR) has been designated lead command for technical manuals. NAVAIR chairs the Technical Council, comprised of technical manual professionals from the SYSCOMs and other major organizations. The Technical Council receives its direction from the Policy Council, chaired by the Chief of Naval Operations (CNO).

2.2.1.1 Current Navy TM System.

Technical manuals are publications and other forms of documentation containing a description of weapons systems, weapons, components, and equipment with instructions for their use and maintenance. TMs are divided into two main types, operational and maintenance, and are grouped in a variety of categories predicated on the type equipment used and the peculiarities of the maintenance requirements. Some of the more frequently seen categories: General Series manuals, which include indexes; operational manuals, which include flight weapons loading checklists, and nuclear weapons loading checklists; maintenance manuals, such as maintenance instruction manuals, wiring manuals, weight and balance, work unit code cards, and structural repair manuals; and Special Application TMs, such as meteorology, chemical equipment airfield lighting, and photographic.

Special note should be made that the Navy currently consolidates all Manage, Stock, and Distribute activities for all types of Navy-wide publications. There are seven groups of

printed material carried in the Navy supply system under the inventory control/management of the Naval Publications and Forms Center (NPFC). These groups are stocked and identified for requisitioning purposes as follows: forms, publications (includes technical publications, training manuals, ships manuals, instruction and repair manuals, stock lists, indexes, Navy recruiting aids, rate training manuals and personnel qualification standards), NAVAIR technical directives, Navy departmental directives, DoD Directives, specifications and standards, and data item descriptions. While several different schemes of numbering or identification are used, all of this material is numbered with stock numbers and can be ordered using MILSTRIP procedures. The Navy has taken the position that this Functional Description must reflect this method of operation. This means that the automated activities for these functional areas must apply to all publications.

The Navy Advancement Center (NAC) was formed in 1972 by merging the Naval Correspondence Course Center, Scotia, NY; Naval Training Publication Centers, Memphis, TN, and Washington, DC; and Naval Examination Center, Great Lakes, IL. The NAC was assigned as a department under the Naval Education and Training Program Management Support Activity (NETPMSA), Pensacola, FL, and is responsible for writing, printing, distributing, and administering Navy enlisted rate training and enlisted/officer professional development manuals and Nonresident Training Courses (NRTCs), and other special publications. The NAC is responsible for over 283 Training Manuals, 335 Nonresident Training Courses (NRTCS) and 175 special publications.

The current technical manual environment is paper-based. Original TM camera copy or negatives are delivered by the manufacturers or in-house developers, and enough manuals are printed by the Navy Publishing and Printing Service (NPPS) to complete distribution and stock for approximately a two or three year supply at the Naval Publications and Forms Center (NPFC) for follow-on requisitions.

The Naval Explosive Ordinance Disposal Technical Center (NAVEODTECHCEN), located at Indian Head, MD, acts as the Prime Manager for the Joint Service Explosive Ordinance Disposal (EOD) Program. As the Prime Manager, NAVEODTECHCEN develops, validates, verifies, publishes, stores, and distributes 60-Series Joint Service Non-Nuclear EOD TMs as instructed by the EOD Military Technical Acceptance Board (MTAB). The MTAB, by DoD 5160.62, is the authoritative body of the Joint Service EOD Program. The MTAB consists of a field level EOD officer from the four independent services. Issues concerning EOD manuals are controlled by the MTAB and executed by the Commander, NAVEODTECHCEN. Additionally, the MTAB officers are detachment

commanders of staff personnel from the respective services. As the Detachment Commanders, they act as the primary point of contact between their respective service for the requirements, acquisition, and distribution of EOD information on matters regarding weapon system development and deployment. Because of the unique mission and Joint Service application of the EOD program, they are identified as an independent entity with access to the joint TM system provided through the Navy. Since the TM procedures for 60-Series manuals are unique, they are not included in the remainder of Section 2.2.

2.2.1.2 Navy TM System Responsibilities.

Within the Department of the Navy, the CNO chairs the TM Management Policy Council, serves as the technical manual research and development sponsor, and the Operations and Maintenance, Navy (O&MN) assessment sponsor. The CNO is responsible for planning, and implementing TM management and flight policy within the Navy. The Commanders, Naval Systems Commands [principally NAVAIR; Naval Facilities Engineering Command; Naval Sea Systems Command (NAVSEA); Naval Supply Systems Command (NAVSUP); and Space and Naval Warfare Systems Command (SPAWAR)] are responsible for establishing specific policy and procedures for the management of the technical manual program. Additionally, each SYSCOM is responsible for overall technical manual management and control within each command. Each SYSCOM has designated organizations to provide support for these functions. These organizations, or Technical Manual Managers (TMMs) are:

- Naval Air Technical Services Facility (NATSF), NAVAIR, Philadelphia, PA

- Naval Electronic Systems Engineering Center, Technical Data Center (TDC), SPAWAR, Portsmouth, VA

- Naval Sea Data Support Activity, NAVSEA, Port Hueneme, CA

- Naval Facilities Engineering Command (NAVFAC), Washington, DC

- Naval Training and Education Command, Norfolk, VA

- Naval Training Systems Center (NAVTRASYSCEN), Orlando, FL

Naval Supply Systems Command, Washington, DC

The SYSCOMs are responsible for providing central control and oversight of the TM program requirements within the SYSCOM, including budgeting requirements, acquisition requirements, the tracking of development, distribution, and updating of TMs, and

the quality control program. The SYSCOMs fund NPPS for TM printing. The Tmms coordinate with the NPPS for the printing, initial distribution of Navy TMs and their updates, and coordinate with NPFC for the stocking of TMs and their changes. The TMMs may be tasked to provide support for these functions under the direction of the SYSCOM.

NAVTRASYSCEN, a NAVAIR unit, serves as TMM for training devices for NAVAIR, NAVSEA, and the Marines.

NETPMSA is responsible for administration of the Navy Enlisted Advancement System as directed by the Chief of Naval Personnel in coordination with the Chief of Naval Education and Training (CNET) and the Commander, Navy Military Personnel Command (COMNAVMILPERSCOM). Such responsibility includes, but is not limited to, the design and development, printing, distribution and administration of Navy professional development and rate training manuals and associated NRTCS. Printing is coordinated by NETPMSA with NPPS, and distribution arranged through NPFC. Distribution is also conducted in conjunction with NRTC administration directly from NETPMSA.

NPPS is responsible for receipt of the original reproducible material and the reproduction and distribution of bulk quantities of TMs. NPPS is responsible for implementation of Department of Defense (DoD) publishing standards for paper as well as electronic publication formats. NPPS is the program manager for the Automated Document Management and Production System (ADMAPS) and the Technical Manual Publish on Demand System (TMPODS). ADMAPS will provide the contractual vehicle to acquire Automated Logistics Publication System (ALPS) and TMPODS will serve as the stocking and distribution point for TMs in digitized formal

NPFC serves as the stocking point for most paper manuals, directives, and forms and as the single inventory control point (ICP) for all Navy manuals, Navy Directives and forms. They are responsible for maintaining a central index, managing all requisitions, and performing distribution services for publications when requested.

NETPMSA also serves as a stocking point for paper training manuals and NRTCs for enrollments of personnel attached to reserve units, personnel from other military services, and DoD civilian personnel. They are responsible for maintaining an inventory, managing requisitions, and performing distribution services for the publications when requested.

SYSCOM-assigned Technical Manual Activities are responsible for effectively maintaining technical data management information for the systems/equipments - approximately 75 activities (both

in-house and contractor cognizant field activities (CFA) and In-Service Engineering Activities (ISEA) fall into this category.

Users are fleet and shore-based personnel such as maintenance and supply technicians, librarians, classroom instructors and students, engineers and administrative personnel needing manuals to perform their duties.

Training manual and NRTC users include officer and enlisted personnel of the regular Navy and naval reserve studying for advancement in rate or rating, or for professional improvements. Materials are also used by members of other services or DoD civilians in order to expand their knowledge and background.

2.2.1.3 Navy Automation.

The primary systems that the Navy has implemented to solve TM management problems are identified in the following paragraphs.

2.2.1.3.1 Naval Publications and Forms Center (NPFC) System.

The NPFC system utilizes the mainframe computing capabilities under the information processing center maintained by the ASO in Philadelphia, PA. Major products of the NPFC system include: the Navy Master Index of COG-1 Material (NPFC PUB 2002) on microfiche, mailing labels, distribution/trailer files for addressing shipments, distribution cost sheets/billing, supply demand review sheets, customer/requisition status notification, requisition release authorizations, forecast of procurements, disposal/excess reports, Issue Requirement Release Documents (IRRDs), reproduction packages, and COG-11 stratification.

2.2.1.3.2 Enhanced - Ships Technical Publication Systems (E-STEPS).

NAVSEA E-STEPS makes use of centralized computing capabilities under the information processing center maintained by the Naval Sea Data Support Activity at Port Hueneme, CA. Generally, the functionality supported is related toward providing management information. As a management information system, over 325 users can access management data associated with TMs.

E-STEPS supports the Navy TM management functions as described in NAVSEAINST 4160.3A. Subsystems of E-STEPS include: Publication Data, NAVSEA Engineering Library subsystem, Ships Tailored TM subsystem, Deficiency Analysis subsystem, Inventory Management subsystem, Digitization Tracing subsystem, TM Identification Numbering subsystem, and the Modular

Specifications subsystem. Some of the major products include: microfiche index products, technical manual indices, distribution lists and mailing labels, Forms and Publications Status Reports, batch file transfer, and management information and exception reports (including ad hoc).

2.2.1.3.3 Modular Specification System (M-SPECS).

M-SPECS makes use of the mini computer capabilities under the Naval Sea Data Support Activity associated with the NAVSEA at Port Hueneme, CA. M-SPECS provides tailored technical manual contract requirements (TMCR) based on the inputs of data on the TM Acquisition Requirements Checklist. The development of a TMCR makes use of logic built into the M-SPEC system to choose appropriate specifications from 21 different specifications and standards. The principal product of the system is a tailored TM Contract Requirement document.

2.2.1.3.4 Electronic Technical Publishing System (ETPS).

ETPS is a Marine Corps systems and is based on the Automated Technical Order System (ATOS) architecture and is a production system capable of accepting MIL-STD-1840 or contractor unique format technical manual data and converting it to M[L-STD-1840 formal ETPS is also used to generate new publications, page changes, and revisions.

2.2.1.3.5 Automated Logistics Publishing System (ALPS).

The ALPS nodes are operated by NPPS at various locations in an effort to enhance currently installed publishing systems to accept, maintain, and publish CALS formatted data. ALPS will provide the workstations to NPPS for the receipt and composition of technical manual data received from Navy activities in SGML format and the on-going maintenance functions including incorporation of changes as approved and directed by Navy activities. Eventually, ALPS will allow for conversion of drawings produced on Navy Computer Aided Design (CAD) terminals to/from the Navy raster storage and distribution point. ALPS will be able to produce traditional hardcopy format and alternate digital media.

Major functions accomplished by the ALPS are: digital document acceptance or creation, editing, SGML processing, composition, and creation of original copy output. The products are camera-ready copy and digital output in accordance with SGML 1840 containing SGML, raster, vector, and/or Page Description Language (PDL) files such as PostScript or Interpress.

2.2.1.3.6 Technical Manual Publish on Demand System (TMPODS).

TMPODS is a system being developed by the Navy Publishing and Printing Service to store digital TMs, primarily to support secondary distribution. It stores TMs in digital raster with indexing, ASCH with SGML, Print Description Language (PDL), and IETM formats. It includes specialized printing and binding equipment to produce paper manuals on demand based on MILSTRIP requests through interface to the Navy Supply System. It produces collections of digital TMs on machine readable media, including CD-ROM and WORM, as ordered by TM managers. It collates changes into basic manuals as requested, based on configuration of the publication in the List of Effective Pages (LOEP). It interfaces to the supply system and TM manager inventory systems to ensure accuracy of its internal index. It includes accounting processes to chargeback for all services provided, according to Navy Industrial Fund Procedures. It generates reports of all system activity. It will be installed at limited major locations to provide for distribution from east coast and west coast sites. It includes redundant repositories and processing to support ADP security.

2.2.1.4 Navy Modernization.

The system will enable the Navy to reach its goals for a TM system that meets the CALS requirements. The automated data system (ADS) will support the functionality of the systems which the Navy has implemented to manage its TM system, as well as provide increased capability to support electronic manuals.

Current responsibilities of the commands concerning policy, management, inventory, and requisitioning will continue to be centralized at those levels, and the reproduction, distribution and maintenance of TMs will continue to be decentralized to various organizations within the commands. In support of this structure, installed components will address all forms of TMs and encompass the TM life cycle from inception to rescission.

2.2.2 Navy Existing Methods and Procedures.

The management of the Navy technical and training manual system is accomplished using DoD Directives and Standards, Navy Instructions through the Navy Technical Manual Management Policy Council’s (NTMMPC) guidance and the applications of Navy specifications and standards. The Navy Systems Commands (principally NAVSEA, NAVAIR, SPAWAR, and NAVSUP) are responsible for establishing specific policy and procedures for the management of the technical manual program while CNET establishes specific management controls over rate training manuals. The systems commands acquire Technical Manuals in response to Navy

needs. Training manuals are developed or revised as naval and occupational standards change, or as directed by course sponsors. TMs are maintained and updated by the individual Navy command with the technical expertise and responsibility. Reproduction services are provided by the Naval Publishing and Printing Service through organic or contractual resources. Physical distribution services for TMs are performed by NPFC, who issues the TMS to Navy, DoD and Foreign Military Sales (FMS) customers, as well as other government agencies and private industry. NPFC identifies material requirements, and procures, stores and distributes material to support its customers, including FMS. Initial distribution services for TMs are provided by NPFC. Initial distribution services for TMs are performed by NPPS, contractors, or NPFC as tasked by the SYSCOM Weapon Systems Program Manager.

2.2.2.1 Manage TM System (A1).

2.2.2.1.1 Navy Description.

The TM management system ensures control and standardization of the major TM system functions: management, acquisition, improvement, publication, stocking and distribution of TMs. The Navy TM system is managed by:

a. The creation and maintenance of TM Policy and Guidance [Navy, and systems commands instructions, Technical Manual Specifications and Standards (TMSS)], and various CNET guides.

b. The identification of system support requirements (budgeting, staffing, services, automated data processing support) needed for the Navy TM system to operate.

c. Control of publication numbering, indexing, and requisitioning.

d. Management of several geographically separated TM repositories.

e. Management of a TM lending library capability.

2.2.2.1.1.1 Navy - Manage Policy and Guidance (All).

The Navy TM system is managed by organizations under the CNO. Naval Systems Commands are responsible for the development, update, revision, approval, and distribution of written guidance on the use and/or management of technical information under their cognizance. Prescribed activities and taskings associated with the management of policy and guidance are depicted in Figure 2-30, Navy - Manage Policy and Guidance. The activities and

taskings are included in Navy directives, technical manual specifications and standards, operating procedures and local instructions.

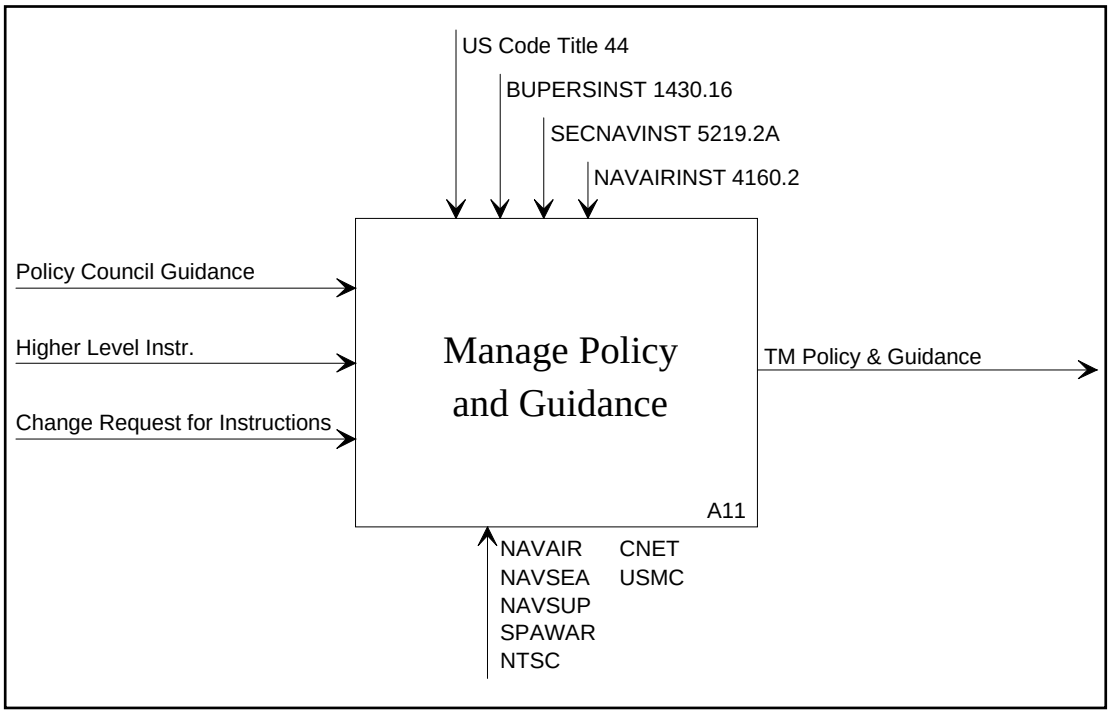

Figure 2-30, Navy - Manage Policy and Guidance

2.2.2.1.1.2 Navy - Provide Systems Support (A12)

Organizations under the CNO identify and define the resources required to support their TM management systems. Following existing policy and guidance, shown in Figure 2-31, Navy - Provide Systems Support, commands identify budgeting and funding, personnel, facilities, services, and automation resources required to support their TM systems. Budget calls are received annually to substantiate budgets and to approve and establish funding appropriations in support of identified technical manual and directive management tasks. The budgeting and funding for technical manuals, directives and forms constitutes a small portion of a major network of financial actions which are used to establish the Navy's Six Year Defense Plan (SYDP) budget requirements. Direct allocations to Navy organizations to cover their technical manual management tasks and directives are made through the issue of resource

authorizations for TM support NAVSEA, for example, issues funding to field activities by either a work request (NAVCOMP Form 140) or Ships Construction Navy (SCN) Funding. Centrally managed Navy forms (COG-11) are funded through the Navy stock fund.

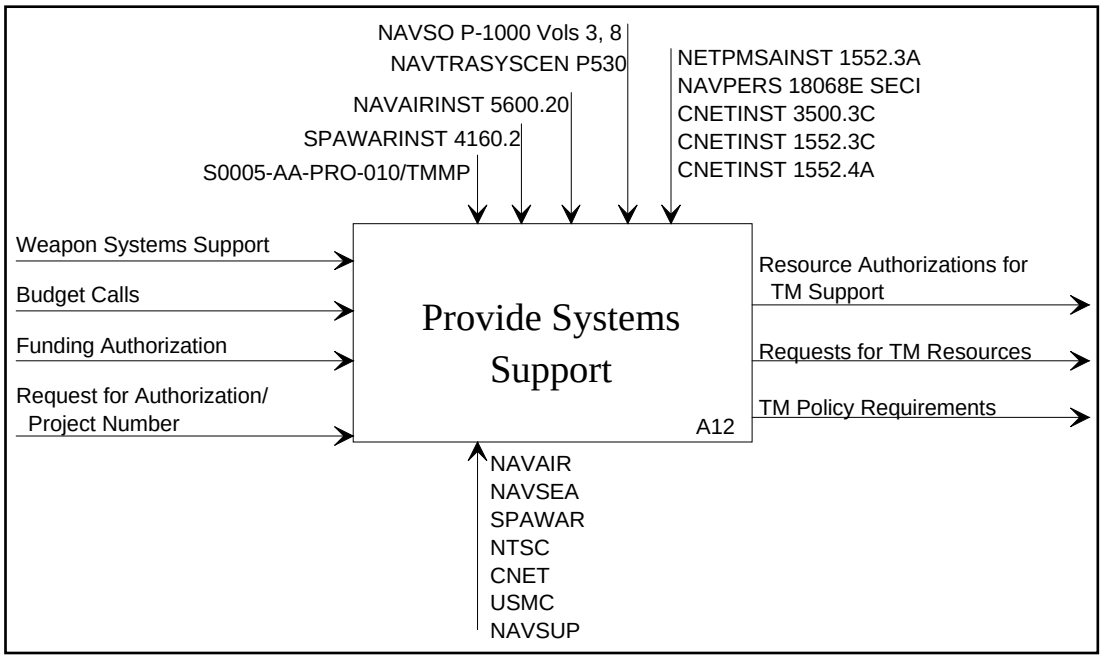

Figure 2-31, Navy - Provide Systems Support

2.2.2.1.1.3 Navy - Control Publication Numbering and Indexes (A13).

Publication numbering, as depicted in Figure 2-32, Navy - Control Publication Numbering and Indexes, is accomplished in two ways by the Navy. First, technical manual identification numbers (TMINS) (or Publication Identification Number) are assigned to group similar technical manuals into categories, systems, equipment series, and/or equipment subseries. Training manual identification numbers [Naval Education and Training (NAVEDTRA)] are assigned to group similar manuals by occupational fields. Secondly, NPFC assigns stock numbers to all Navy technical manuals. Technical manuals are stock numbered to uniquely identify technical manuals for requisitioning purposes. The control of publication numbering also includes those actions taken to reinstate, renumber, cancel, rescind a TM, or cancel/change a stock number. The actions taken to control publication numbering are reflected in the TM indices. The individual Navy commands maintain TM indices for management

purposes. Navy directives and forms are assigned both directive/form numbers and stock numbers in a similar manner.

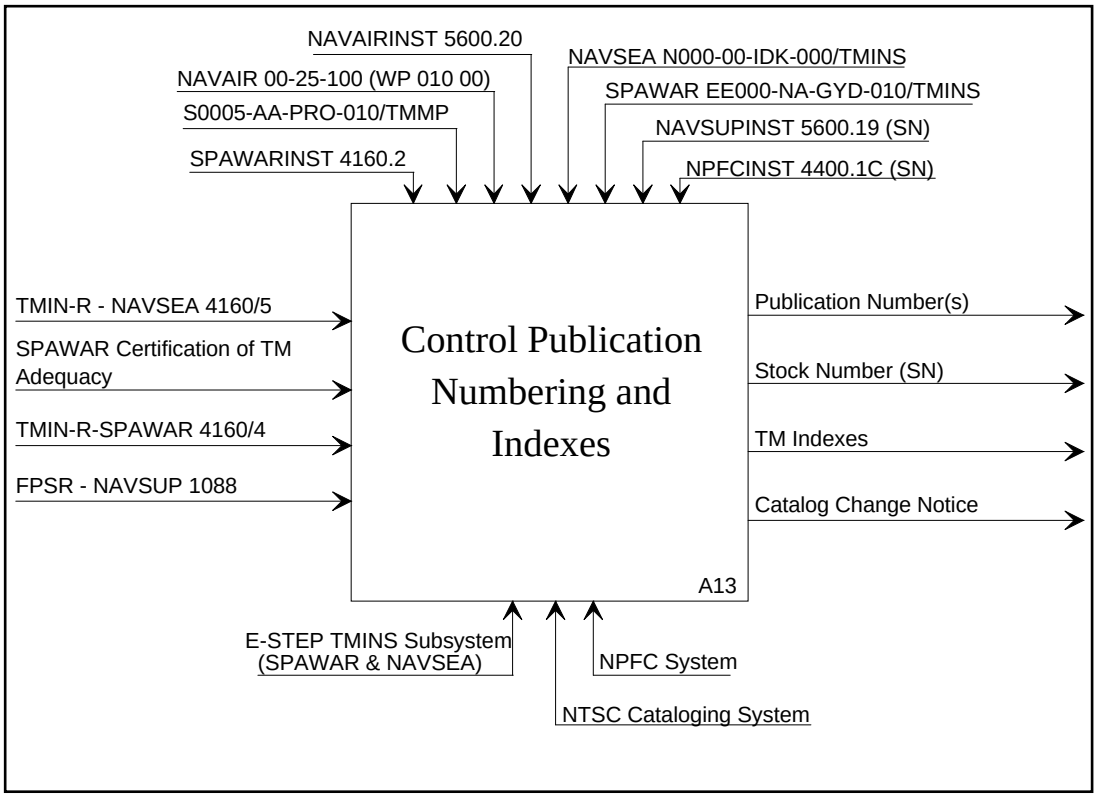

Figure 2-32, Navy - Control Publication Numbering and Indexes

2.2.2.1.1.4 Navy - Manage TM Repository (A14).

Navy activities and USMC are responsible for maintaining paper and/or digital data repositories of all manuals, changes, revisions under their cognizance. The management of these repositories is depicted in Figure 2-33, Navy - Manage TM Repositories. Superseded manuals are maintained to assist in accident investigations and to respond to foreign government requests, freedom of information requests, audits, inspections, etc. The sponsoring Navy activities and locations of the repositories are listed below in Table 2-1, Navy Sponsoring Activities.

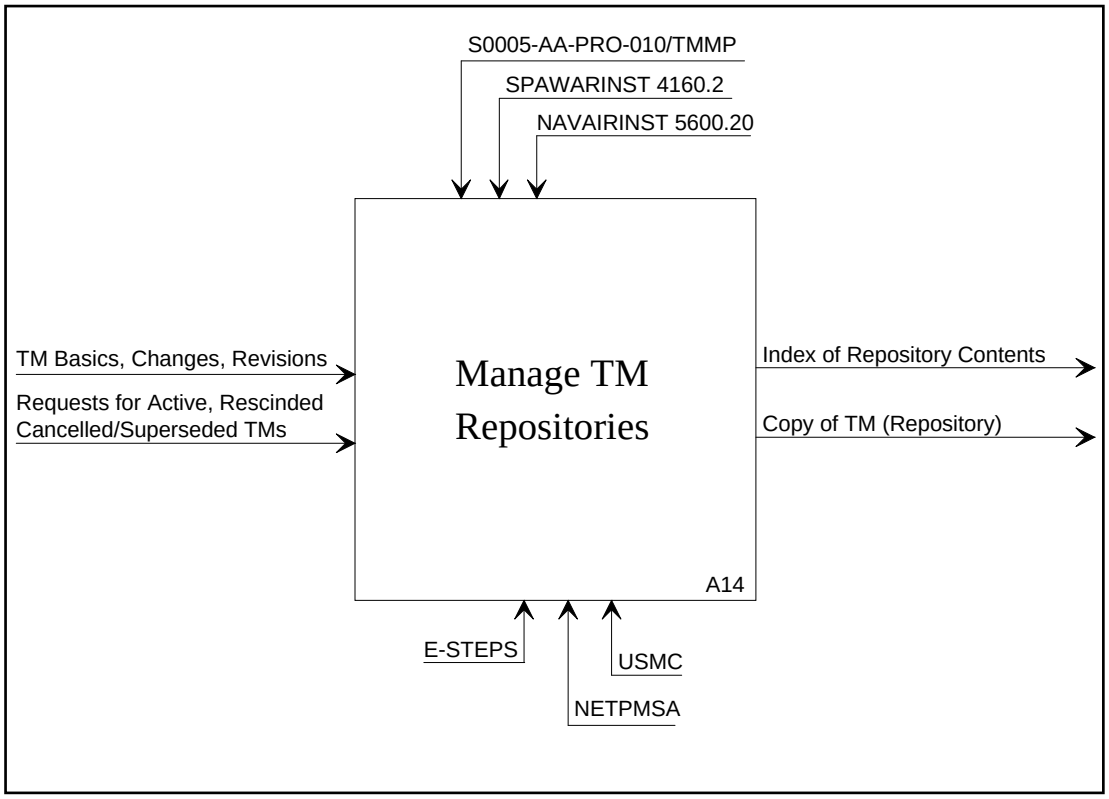

Figure 2-33, Navy - Manage TM Repositories

Table 2-1, Navy Sponsoring Activities

Sponsoring Activity	Facility	Location
NAVAIR	Naval Air Technical Services Facility	Philadephia, PA
NAVSEA	Naval Sea Data Support Activity	Port Hueneme, CA
SPAWAR	Naval Electronic Systems Engineering Center	Portsmouth, VA
NAVAIR	Naval Training Systems Center	Orlanda, FL
USMC	Marine Corps Logistics Base	Albany, GA
CNET	Naval Education and Training Program Management Support Activity	Pensacola, FL

2.2.2.1.2 Current Navy Organizations and Personnel Responsibilities.

The following reflects the key responsibilities of the primary participants to support these functions:

a. Secretary of the Navy:

1. Establish policies and procedures for management, acquisition, and maintenance of Technical Manuals involved in the life cycle support of Navy and Marine Corps weapons systems and equipment.

2. Provide leadership in the research and development of advanced technology for the development, presentation, use, storage, and retrieval of TM information.

b. Chief of Naval Operations:

1. Plan and implement the Technical Manual Management policies within the Navy.

2. Develop and advise on how to achieve standardization and modernization in TM acquisition, update, and reprint.

3. Implement new procedures and policies required to transition emerging technology, such as digitized data and automation techniques, into the Navy TM program.

4. Chair NTMMPC.

c. Commandant of the Marine Corps:

1. Plan and implement the technical management policies within the Marine Corps.

2. Provide for Marine Corps Technical Manual Councils comparable in form and responsibility to the Navy Technical Manual policy and technical councils or provide a member (or members) to the Navy council’s integrating Marine Corps and Navy plans.

d. Naval Systems Commands (NAVAIR, NAVSEA, NAVSUP, SPAWAR, and Naval Facilities and Engineering Command):

1. Establish specific policy and procedures for the uniform application and execution of the TM program.

2. Determine acquisition and life cycle costs, budget

for, and administer the TM program within their respective commands.

3. Provide representatives on the NTMMPC and the Navy Technical Manual Technical Council (NTMTC).

4. Manage resource requirements for the TM management which includes the definition of the requirement, priorities, and improvements.

5. Execute funding plans to meet the Navy requirements.

6. Review TM specifications and standards for currency and improvement.

7. Provide management visibility to TMs as a function of Integrated Logistics Support (ILS) throughout the life cycle of a system or equipment.

e. Commander in Chief, U.S. Atlantic Fleet (CINCLANFLI), Commander in Chief, U.S. Pacific Fleet (CINCPACFLT), CNET, Commander, Naval Medical Command.

1. Collaborate with the CNO in human factors engineering and training aspects of the TM program.

2. Participate in the NTMMPC and the NTMTC when matters of interest to their commands are involved.

f. NETPMSA.

1. Develops rate training manuals, nonresident career courses and correspondence courses. Administers the Navy’s correspondence course system.

2. Administers the Navy’s Enlisted Advancement System.

2.2.2.1.3 Navy Equipment.

a. Standard office automation systems.

b. E-STEPS equipment (see Section 5 for more details).

c. M-SPECS equipment (see Section 5 for more details).

d. NPFC System (see Section 5 for more details).

2.2.2.1.4 Navy Deficiencies.

a. Current TM management is decentralized to each Navy Systems Command with each having procedures, terminology, and forms which are neither standardized nor uniform.

b. Many TMSS are outdated.

c. Not all naval activities have the capability to handle CALS compliant data.

d. There is a severe lack of standard office automation equipment, manpower, and funds to meet overall system needs.

e. Policies and guidelines are not always updated and disseminated to commands in a timely manner.

2.2.2.2 Acquire TMs (A2).

2.2.2.2.1 Navy Description.

The Navy acquires TMs to maintain and operate weapon systems and equipment, or to provide knowledge in support of naval or occupational standards or to meet course sponsor objectives. All Navy equipment and systems except those specifically excluded are operated and maintained according to procedures described in TMs. Requirements for new TMs result from weapon system acquisition, equipment acquisition, changes in operations and/or maintenance concepts and system modification programs, or from changes to naval and/or occupational standards or course sponsor requirements. Those agencies involved in the TM acquisition process include the agency procuring the TMs (acquiring agency), the TM developer (either contractor or government), the TM user (using agency), and any other organization directly or indirectly supporting the acquisition effort. TM acquisition includes acquisition planning, development of government TM planning documentation, the review and approval of that documentation, controlling the TM development effort, and development of the TM.

The overall system program tasking documents identify and define the requirements for TMs to support the weapon system, equipment or modification being acquired. TM acquisition reference documents are used to guide the development effort and to assist in the development of program documentation.

2.2.2.2.1.1 Navy - Develop Planning Documents for TM Acquisition (A21).

Technical manuals and/or technical information may be acquired for the Navy through the use of organic or contractual

resources. In either case, the acquisition of technical information requires the development of planning documentation. Planning documentation is developed in conjunction with the receipt of tasking documents [Mission Need Statement (MNS), Naval or Occupational Standards, Sponsor Requirements] which provide the authority to proceed with the acquisition of technical information. This process is shown in Figure 2-34, Navy - Develop Planning Documentation for TM Acquisition. The planning documentation developed includes drafts of the TM contracts data requirements (CDRL) and tailored Data Item Descriptions (DIDs), TMCR document, statement of work (SOW), TM verification plan (VP), TM Acquisition Requirements Checklist (TMARC), and the technical manual management plan (TMMP).

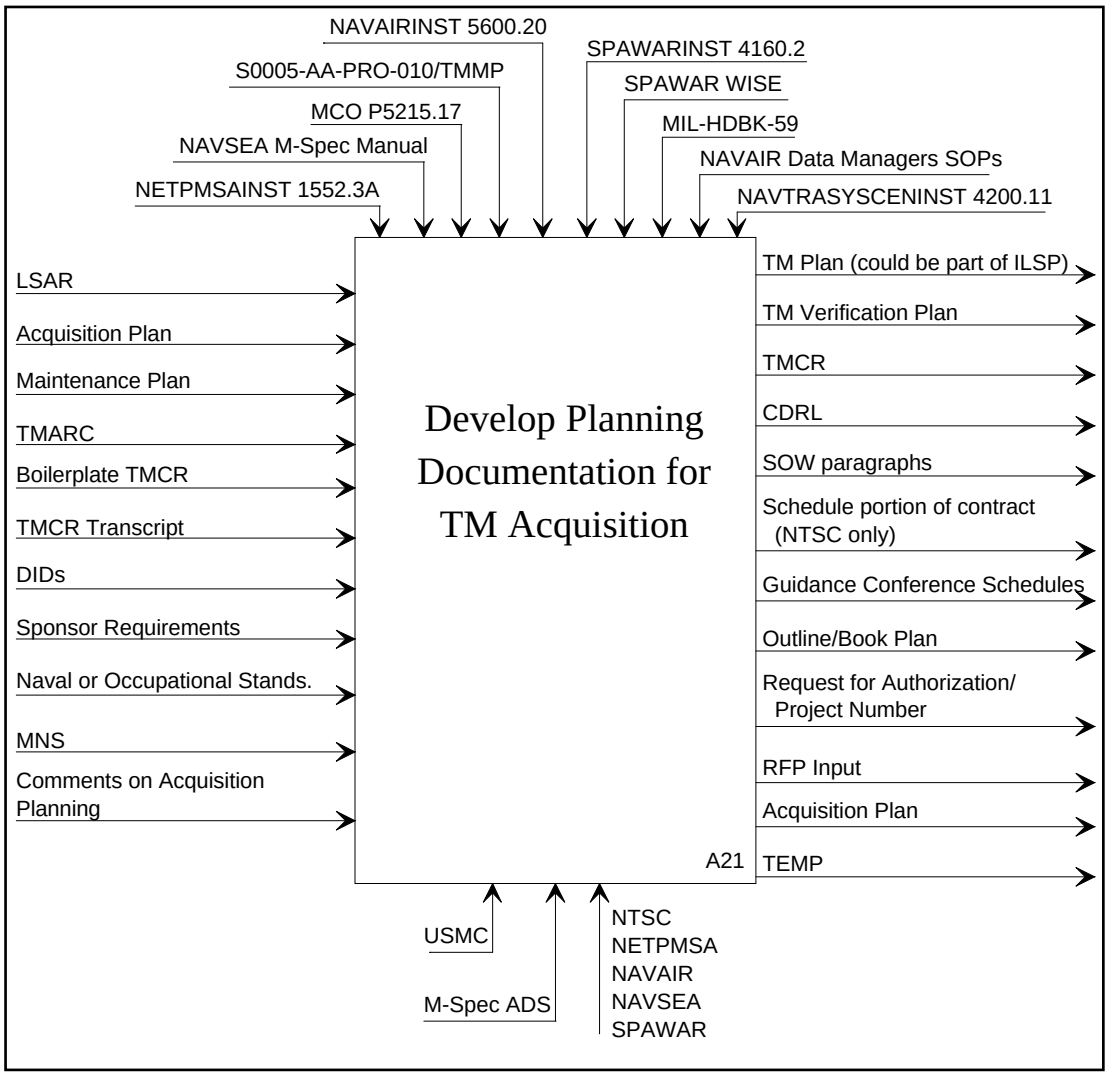

Figure 2-34, Navy - Develop Planning Documentation for TM Acquisition

Planning documents identify the organizations involved in the acquisition process, the development schedules, required technical and management data, required documentation reviews (meetings and conferences), and projected costs. Planning documents are reviewed and coordinated with all interested parties. The development plans may also be used to develop the draft input to the request for proposal (RFP).

From a contractual point of view, planning documentation is used to develop relevant sections of an RFP. RFP input is reviewed and approved for inclusion into an RFP and provides a relevant baseline to evaluate contractor performance concerning the development, revision, update, or change to technical

information.

Once reviewed, coordinated, and approved by all required agencies, planning documentation provides the guidelines for subsequent program management and technical manual development.

2.2.2.2.1.2 Navy - Control TM Acquisition (New Manuals and Updates) (A22).

Control of the TM acquisition process is accomplished through the review of documentation developed by the government for program management purposes, review of contractor developed management plans, in-process reviews of TMs as they are developed, and government verification of TMs. These activities are represented in Figure 2-35, Navy - Control TM Acquisition (New Manuals and Updates).

Contractor prepared development plans and status reports are used for in-process reviews of technical manuals (preliminary or formal TMs). In-process reviews (IPRS) ensure TMs are prepared in accordance with the applicable TMSS for style, format and other contractual requirements. These reviews allow the Govemment acquiring agency to provide guidance and comments concerning the technical development of Tms and to evaluate the progress of TM development. Status information on TM development is recorded for management purposes.

As a result of the approval/acceptance of TM development plans and reports, publication number (e.g., TMINS) requests are generated and field users establish the initial distribution (ID) requirements. Publication numbering requests include the use of NAVSEA Form 4160/5, SPAWAR Form 4160/4, and NAVSUP Form 1088. If the TM is identified as a preliminary or formal TM, users may order the TM from ISEA or stocking points.

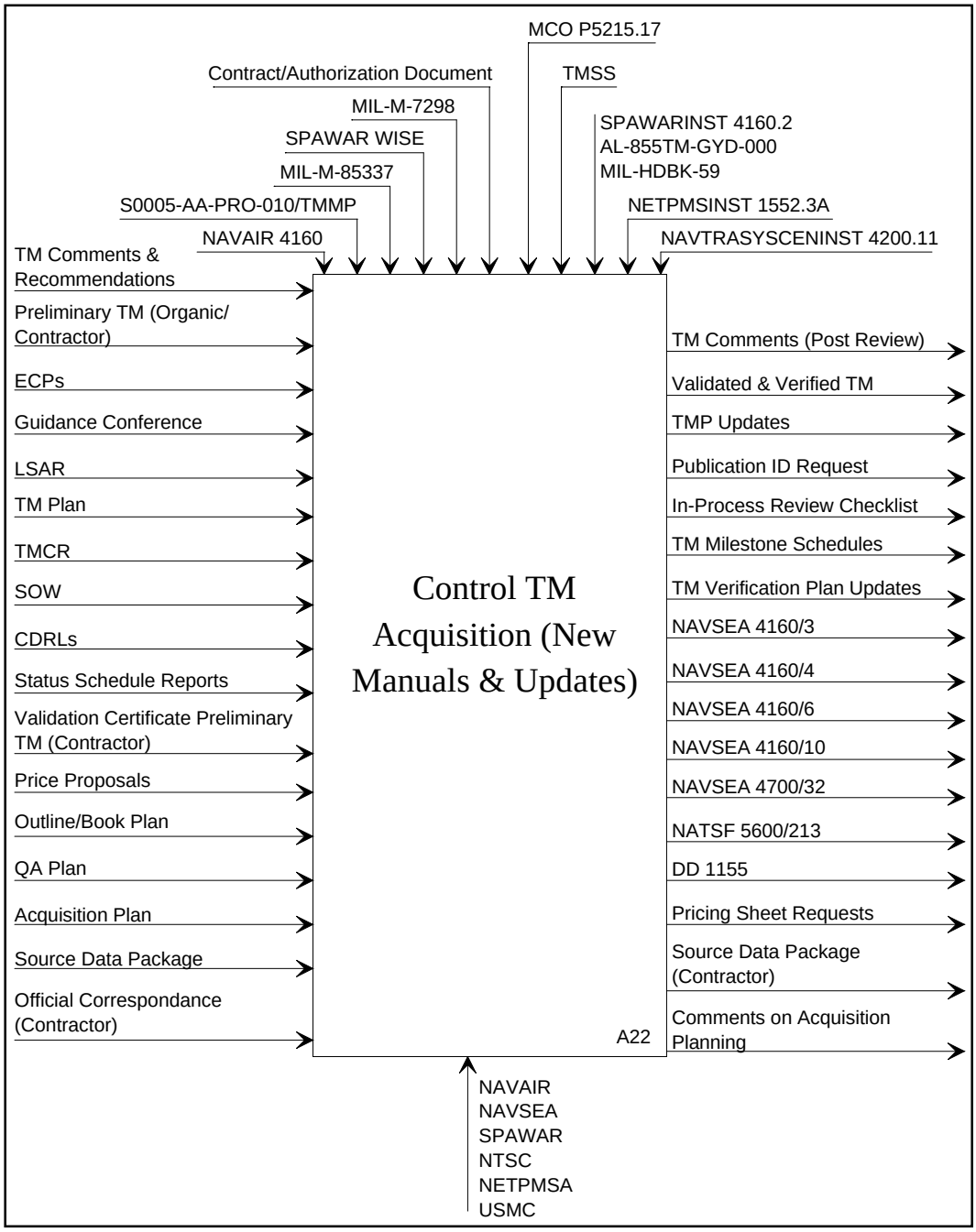

Figure 2-35, Navy - Control TM Acquisition (New Manuals and Updates)

Commercial Manuals, if approved by the Navy, may be supplied and supplemented as needed, in lieu of the development of TMs. An analysis of the acceptability of commercial manuals is performed in accordance with MIL-M-7298.

Verification of TMs is the process by which a developer validated TM is tested and proven by Navy personnel for adequacy of operation and maintenance of system/equipment acquired for operational units. Verification is also used to certify that preliminary technical manuals (PTMS) are technically accurate and compatible with the hardware/software and operating environment. Technical Adequacy Certification [Technical Adequacy Form (S&NWSC)] is required by SPAWAR. Developing, using, supporting, and acquiring organizations assist in the planning and execution of this verification effort and compliant with CALS requirements.

Upon final review and approval, the PTM is updated and forwarded for printing, distribution, and use as a formal TM.

2.2.2.2.1.3 Navy - Develop and Update TMs Organically (A23). (A23)

TMs may be developed organically or by contracting out to meet Navy requirements. Navy activities involved in the preparation of TMs use existing technical data, naval/occupational standards or sponsor objectives, and TM reference documents. The development of TMs may be on a page change basis, complete revision, or the development of new manuals such as technical instructions, standard depot level manuals (SDLMS) and/or other types of TMs. This development of TMs is depicted in Figure 2-36, -Navy - Develop and Update TMs Organically.

In support of the revision, update, and/or development of page changes to an existing TM, Navy activities use a source data package to develop changes to TMs. For in-house changes to TMs, the source data package consists of a marked-up (red-lined version of the TM) and an annotation where the text/figure/table/graphic is affected by recommended changes [e.g. Manual Change Releases (MCRs), Airframe Changes (AFCS) or Technical Publication Deficiency Reports (T?DRs)]. The basis of training manual or NRTC changes include student letters, sponsor direction, or changes to naval/occupational standards. An errata is issued to make changes to a training manual or course.

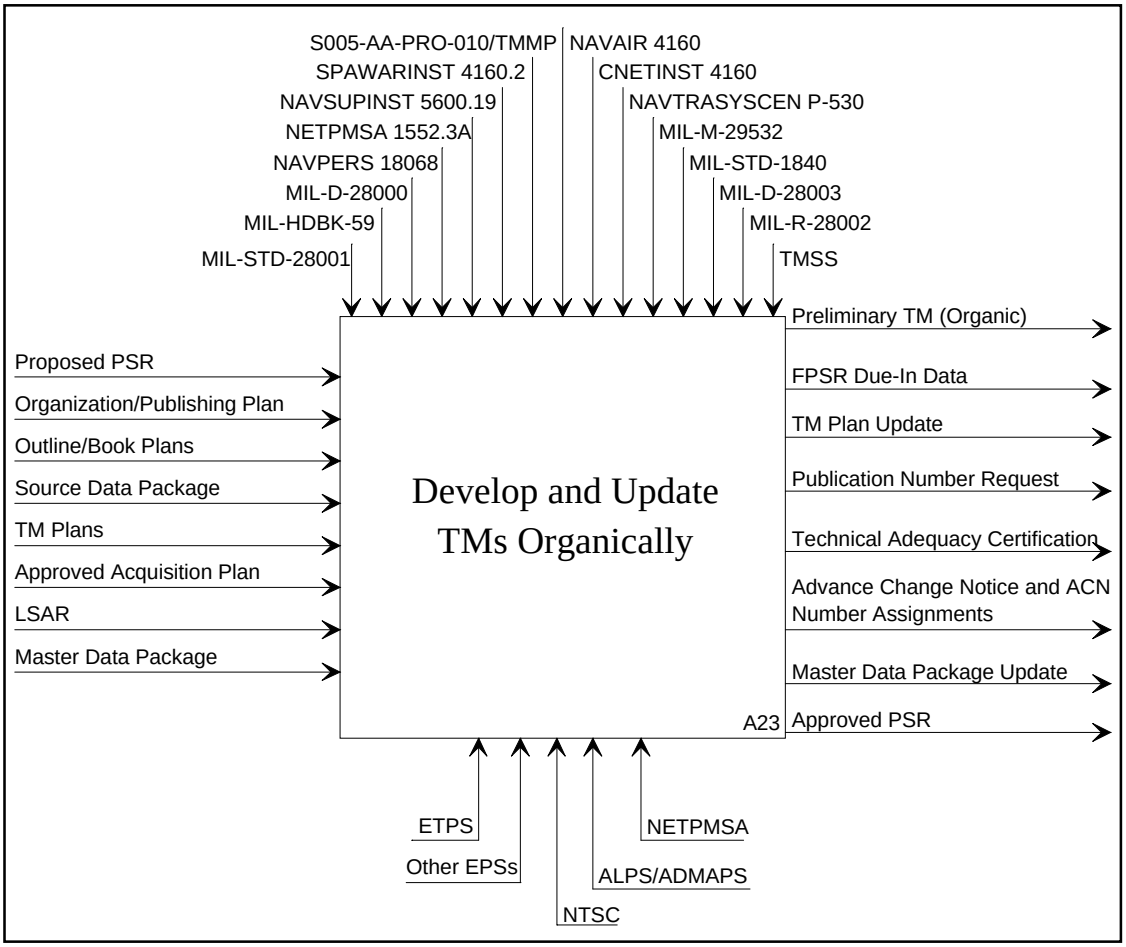

Figure 2-36, Navy - Develop and Update TMs Organically

Generally, Navy organic resources update the TM master data package (MDP) in connection with the development of TMs and/or changes made to TMs. The MDP is a generic term intended to include all data and documentation from which a technical manual is written, changed, or revised. The fundamental sources and authority for data in the technical manual are the engineering drawings and specifications. From these are developed the text for instructions, the illustrations for diagrams, other art used in a TM, and for the illustrated parts breakdown (IPB). Elements of the MDP are:

a. Master Copy of the TM.

b. Reproducible masters or a record as to location of the reproducible master.

c. Master negatives, microfilm, or electronic media, or record as to location of same.

d. Board art or record as to location of same.

e. Copy of all technically validated data to be incorporated into TM. Data in this category includes, but is not limited to:

1. AFCS, Power Plant Changes (PPCs), Support Equipment Changes (SECs), etc.

2. Approved Engineering Change Proposals (ECPs).

3. Change recommendations received in connection with the TM [e.g., TPDRs and Manual Change Notices (MCNs)].

4. Design Change Notices (DCNs).

5. Rapid Action Changes (RACs).

6. Equipment Photographs (authorized modifications incorporated).

7. Miscellaneous related correspondence.

f. Provisioning Parts Breakdowns (PPBs).

g. Approved Support Equipment Lists (SELs).

h. Logistics Support Analysis Records (LSAR) and/or Maintenance Engineering Analysis Records (MEARS) (where applicable).

i. Engineering Drawings.

Contractors validate TMs to assure contract compliance. Validated TMs are submitted to the Navy for verification.

As required by contract, the developer of TMs submits preliminary TMs, plans, reports, and schedules to the acquiring agency for review, approval/disapproval, and/or comments.

2.2.2.2.2 Current Navy Organizations and Personnel Responsibilities.

The following reflects the key responsibilities of the primary participants to support these functions:

a. Naval Systems Commands.

1. Provide control of TM acquisition requirements, including the criteria essential to approve or reject technical manuals offered by contractors and other preparing activities.

2. Track the development of TMs.

3. Record, analyze, and distribute acquisition and other life cycle cost data of technical manuals.

4. Ensure that TMs are acquired to approved specifications, deviations and waivers cited in TM Contract Requirements.

5. Ensure that contractor validations are adequately performed, and the discrepancies have been corrected prior to acceptance.

6. Ensure a thorough verification program, conducted by Naval personnel with the skill levels equal to those of the intended users in the expected operational environment.

7. Accept only manuals which are technically accurate and adequate, and suitable for quality reproduction.

8. Ensure each new acquisition and modification contract includes requirements for a TM quality assurance program.

9. Use LSAR to the maximum extent possible in the development of TMs.

10. Tailor Navy specifications, standards, and requirements documents for the acquisition of technical manuals.

11. Assign Navy TM identification numbers to all new or revised technical manuals.

b. Fleet Commands.

1. Assist the systems commands in determining the scope of technical material to be included in TMS and the overall needs of the users.

2. Participate in and make recommendations regarding verification of TMs.

c. NETPMSA.

1. Control the training manual and NRTC in-house development and production processes.

2. Track the development of training manuals/NRTCs.

3. Ensure training manuals/NRTCs are developed or produced to approved specifications.

4. Ensure reviews are conducted by rating sponsors, technical advisors and others with a vested interest as appropriate.

5. Assign NAVEDTRA numbers to all new or revised training manuals/NRTCs.

2.2.2.2.3 Navy Equipment.

a. Standard office automation systems.

b. E-STEPS equipment (see Section 5 for more details).

c. M-SPECS equipment (see Section 5 for more details).

2.2.2.2.4 Navy Deficiencies.

a. The currently implemented systems in some of the systems commands do not fully support all functions associated with acquisition, management, or distribution of digital TM data.

b. There is no on-line, interactive review of acquisition plans, schedules, or status reports.

c. It takes too long to get updated training materials to the users within the Navy and Naval Reserve.

2.2.2.3 Improve TMs (A3).

2.2.2.3.1 Navy Description.

TMs, because of errors, problems, improvements and system/equipment modifications are updated/changed during their life cycle. Perceived deficiencies and recommended changes are documented and submitted for review, evaluation and incorporation as approved changes. Evaluation, consisting of policy and procedure reviews or engineering/technical analyses, may result in either change request disapproval or generation of an official TM update. Updates may take the form of formal TM changes or revisions.

Identification of problems, improvements, and deficiencies with Tms occurs through:

a. User submission of recommended changes;

b. Review of system/equipment/software changes (ECPS) which require modification (companion changes) to TMs;

c. Management identification of excessive TM recommended changes being submitted;

d. Periodic TM reviews;

e. Procurement of replacement parts of support equipment;

f. Change in operational requirements or maintenance concepts; or

g. Changes to naval and/or occupational standards, or sponsor requirements.

TM improvement manages TM updates through initiation and identification of recommended changes, tracking and administrative review of the requests, evaluation of problems and suggested corrective actions, and issuance of official TM update packages.

2.2.2.3.1.1 Navy - Recommend Change (A31).

Any condition or perceived deficiency which requires a change to the content of an existing TM is submitted by a recommended change request [Technical Publications Deficiency Report (TPDR), Technical Manual Deficiency Report (TMDER), etc.] which is routed through established channels. These recommendations, shown in Figure 2-37, Navy - Recommend Change, may clarify data, correct data, or improve procedures. Recommendations may include one or more attachments. These attachments include handwritten narrative, drawings, copies or photographs to identify or clarify a discrepancy.

Recommended changes to TMs may result from hardware or software modifications (technical directives, alterations, field changes, etc.), changes in occupational or Naval standards, changes in components, changes in policy or procedures, changes in operational requirements, or changes in maintenance concept.

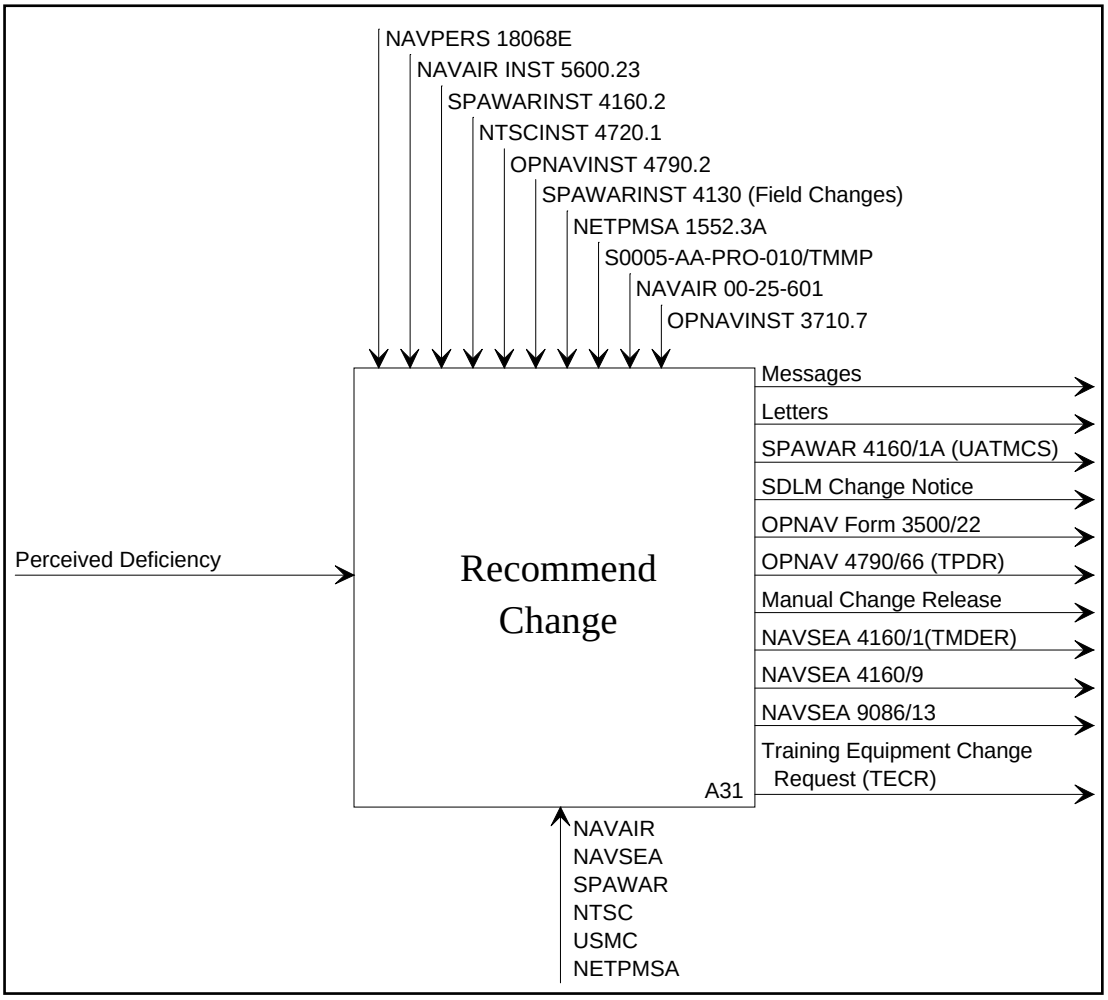

Figure 2-37, Navy - Recommend Change

Recommended changes to TMs are classified in various ways by the Navy. Usually, originators classify change recommendations as safety related or other.

2.2.2.3.1.2 Navy - Control TM Improvement System (A32).

The TM improvement system, as shown in Figure 2-38, Navy - Control TM Improvement System, is managed to identify TM deficiencies, control and evaluate recommended changes, and ensure timely and accurate publishing of TM updates. This is accomplished through the user improvement reporting system, periodic TM reviews, review and evaluation of recommended

changes, monitoring recommended change request progress, and the suspensing of management actions. Safety related deficiencies require a faster turn around time.

Recommended changes are generated by individuals, and reviewed by supervisors, quality assurance organizations, and cognizant command organizations for validity, duplication and submittal to the responsible TM manager. The TM manager performs an administrative review and may forward the recommended change request to the technical content manager for evaluation, which may include engineering or contractor analysis, and approval. The recommended change may be disapproved at any level. The TM manager maintains records of recommended change request progress, status, and corrective actions, if any.

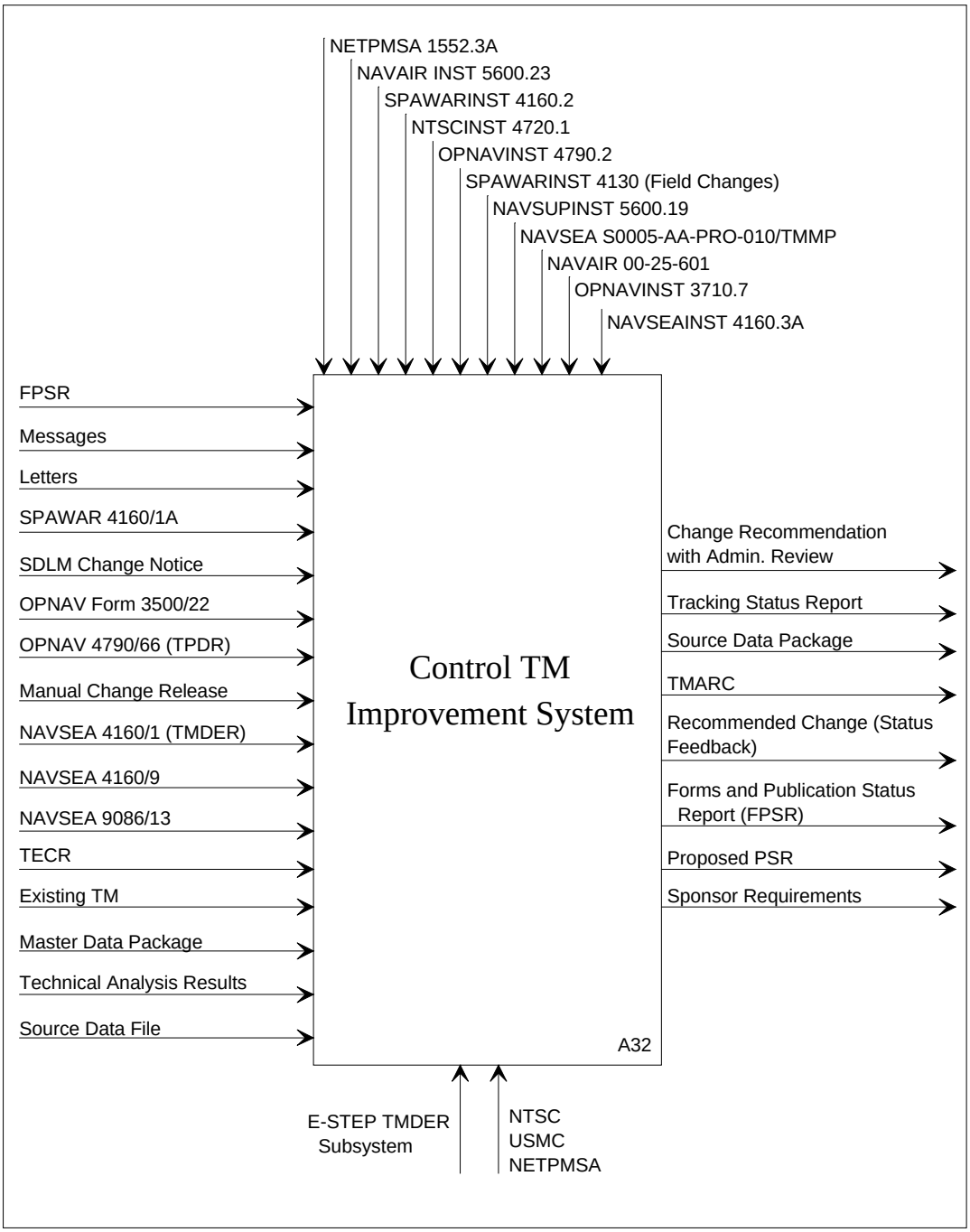

Figure 2-38, Navy - Control TM Improvement System

The primary means by which the Navy manages its improvement system is through the use of a NMP and the creation of a Source Data Package (SDP). The MDP, explained in Develop and Update TMs Organically (A23) (paragraph 2.2.2.2.1.3), is a generic term intended to include all data and documentation from which a technical manual is written, changed, or revised. The items listed may be reviewed or the MDP updated in connection with controlling TM improvements.

The SDP or update package (design folder) is created from the MDP. It is an accumulation of validated data pertinent to the contemplated update of a TM. Over the lifecycle of a TM, many source data packages may be created. The TM manager typically maintains a marked-up (red-lined version) of the TM in the source data package and makes use of a source data worksheet to track approved changes to a TM to affected pages and/or illustrations within the TM. The source data worksheet is used by the TM manager to gauge when to initiate an update and whether the update will be a page change update, NAVSEA's RAC, or revision. TM managers also establish data cut-off dates and summarize the contents of the source data package at that time. The marked-up technical manual and source data worksheet are used to prepare a work summary form which is used to estimate the cost of updating or revising a TM. The marked-up training manual and design folder are used to prepare a project status report (PSR) which is used to estimate the time needed to update or revise a training manual.

In support of organic revisions, updates, and/or development of page changes to an existing TM, source data packages are used to develop changes to TMs. For these in-house changes to TMs, the source data package consists of a marked-up (red-lined version of the TM) and an annotation where the text/figure/table/graphic is affected by recommended changes (e.g., MCRS, AFCS, or TPDRS).

For source data packages going to contractors, the source data package consists of. a copy of the TM and all published changes, recommended changes which could affect the contents of the manual(s) (e.g., MCRS, SECS, TPDRS), all drawings, manuals, letters, etc. which are referenced in the source data, and logistics data including copies of Support Equipment Requirement Sheets, maintenance plans and documents reflecting Source, Maintainability and Recoverability (SM&R) code changes. Contractors may be given source data package(s) to provide price proposals on the update of TMs. The price proposal indicates the number of pages to be changed and the cost of changes. The number of pages to be changed indicates whether a complete revision is required. Navy instructions stipulate that if a substantial number of pages of a TM are to be changed, a revision

of the TM is required.

2.2.2.3.1.3 Navy - Perform Technical Content Analysis (A33).

After initial administrative reviews, recommended change requests may be sent to technical manual managers or specially constituted review boards for technical evaluation. This process is shown in Figure 2-39, Navy - Perform Technical Content Analysis. The technical evaluation may include engineering analysis by contractor personnel. The result of the evaluation may be disapproval, approval with modifications, or approval as written,. and may include a recommendation to decrease the priority.

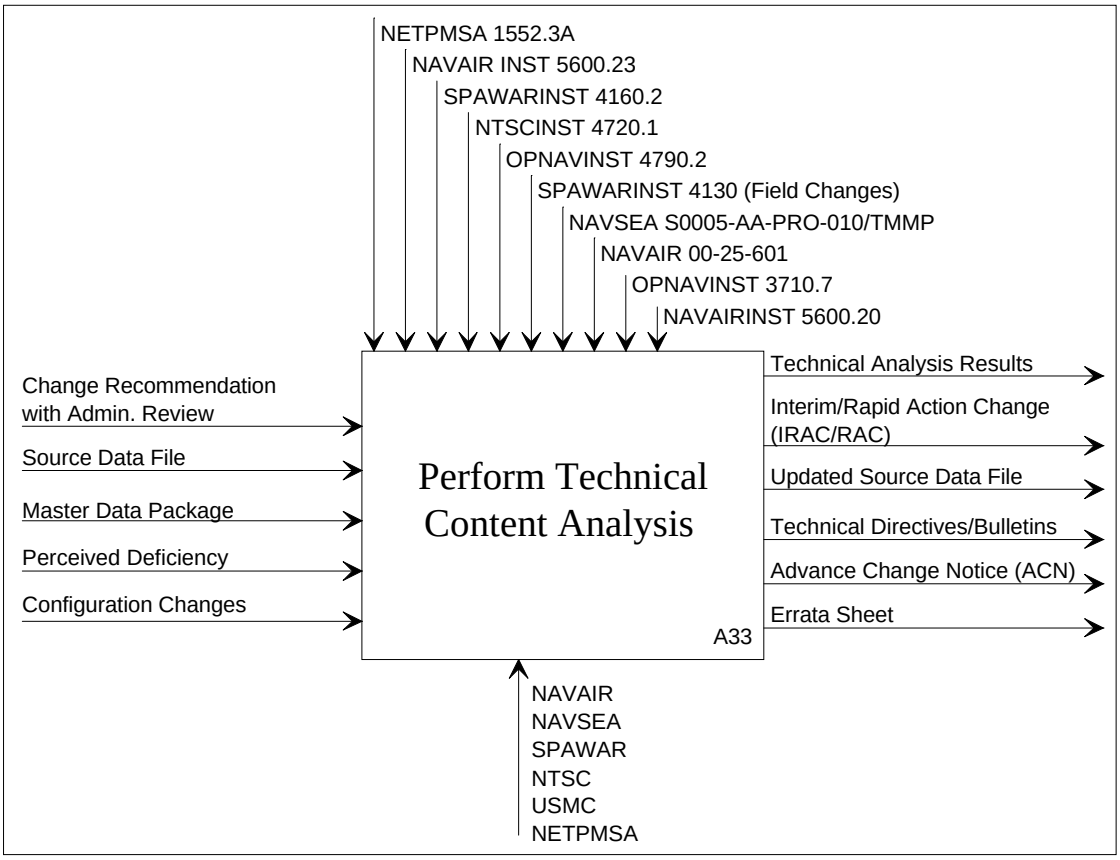

Figure 2-39, Navy - Perform Technical Content Analysis

Any delay caused by the evaluation process must be reported to the initiator through the status reporting system. Delays include reviews by special management agencies, engineering analysis, contractor review, publishing delays, etc.

When the evaluation determines that the recommended change is valid, the corrective action is finalized, and the results of the technical analysis are sent to the TM manager. In some cases, the technical manual manager may determine that a discrepancy exists and may initiate the change process directly with an Interim Rapid Action Change (IRAC), a Rapid Action Change (RAC), an Advance Change Notice (ACN), Navy Training Directive, or an errata sheet. In performing technical content analysis, all recommended changes are evaluated for impact on other TMs. In addition, a technical analysis of TM changes may be initiated on receipt of engineering change proposals. Under this scenario, TM changes within and across TMs are reviewed to identify companion changes to TMs. In either case, all recommended changes or formal changes to equipment/systems are evaluated for impact across TMs and/or the source data associated with TMs.

2.2.2.3.2 Current Navy Organizations and Personnel Responsibilities.

The following reflects the key responsibilities of the primary participants to support these functions:

a. Naval Systems Commands:

1. Track the development of changes, updates, and revisions to technical manuals.

2. Provide replies to TM deficiency reports.

3. Operate and maintain a TM improvement reporting system.

4. Maintain and keep current Master Data Packages and Source Data Packages for each TM for use by organic resources or by contractors.

5. Establish and maintain systems and capabilities to effect timely and efficient maintenance of assigned technical manuals.

b. Fleet Users:

1. Evaluate/submit recommended changes to the technical manual system.

2. Participate in periodic reviews of the TM program.

c. NETPMSA:

1. Track the development of changes and revisions to

training manuals/NRTCs.

2. Provide replies to student letters concerning errors and out of date material.

3. Maintain and keep current the audit trail and project files for each training manual.

2.2.2.3.3 Navy Equipment.

a. Standard office automated systems.

b. E-STEPS equipment (see Section 5 for more details).

2.2.2.3.4 Navy Deficiencies.

a. The TM update process is time consuming and labor intensive.

b. All Navy systems do not have interactive quality review or revision capability of TMs in the update process.

c. Not all Navy systems have the means for automated tracking, control, or configuration management of TMs in the maintenance process.

d. There is extensive processing time for TM deficiency reports.

e. There is no guarantee that an errata sheet is forwarded when the training manual and/or NRTC are shipped to the requester. If the requester already has the manual or course, the requester does not receive the errata sheet unless requested separately.

f. There is an excessive delay in the availability of new and/or revised training manuals and NRTCs for the fleet.

2.2.2.4 Publish TMs (A4).

2.2.2.4.1 Navy Description.

Publication of TMs is accomplished through NPPS during the acquisition or improvement process. The NPPS will either produce the TMs in-house or procure them through the Government Printing Office (GPO) support required.

Preliminary/Formal TMs, TM Index updates and changes to publications are prepared as a reproducible master and incorporated into a reproduction package. The publisher

reproduces the TMs as prescribed by the directions received in the reproduction package. Published Tms are distributed to the assigned storage facility (Stock TMs) distributed as initial distribution. When the reproduction is completed, the reproducible master is returned to the responsible organization for configuration control.

2.2.2.4.1.1 Navy - Develop TM Reproducible Master (A41).

The Navy develops reproducible masters from updated TM indices and/or preliminary/formal TMs which have been received from contractors or from organic activities. This development is shown in Figure 2-40, Navy - Develop TM Reproducible Master. A reproducible master may be prepared as camera-ready copy (including artwork) or as a digital representation in accordance with MIL-STD-1840. The reproducible master (including all artwork) will receive pre-publication review for technical accuracy, format, punctuation, and editorial correctness. TMs, page changes or revisions that are delivered under MIL-STD-1840 are checked for compliance with the appropriate military specifications and standards on the exchange and/or format of TM information.

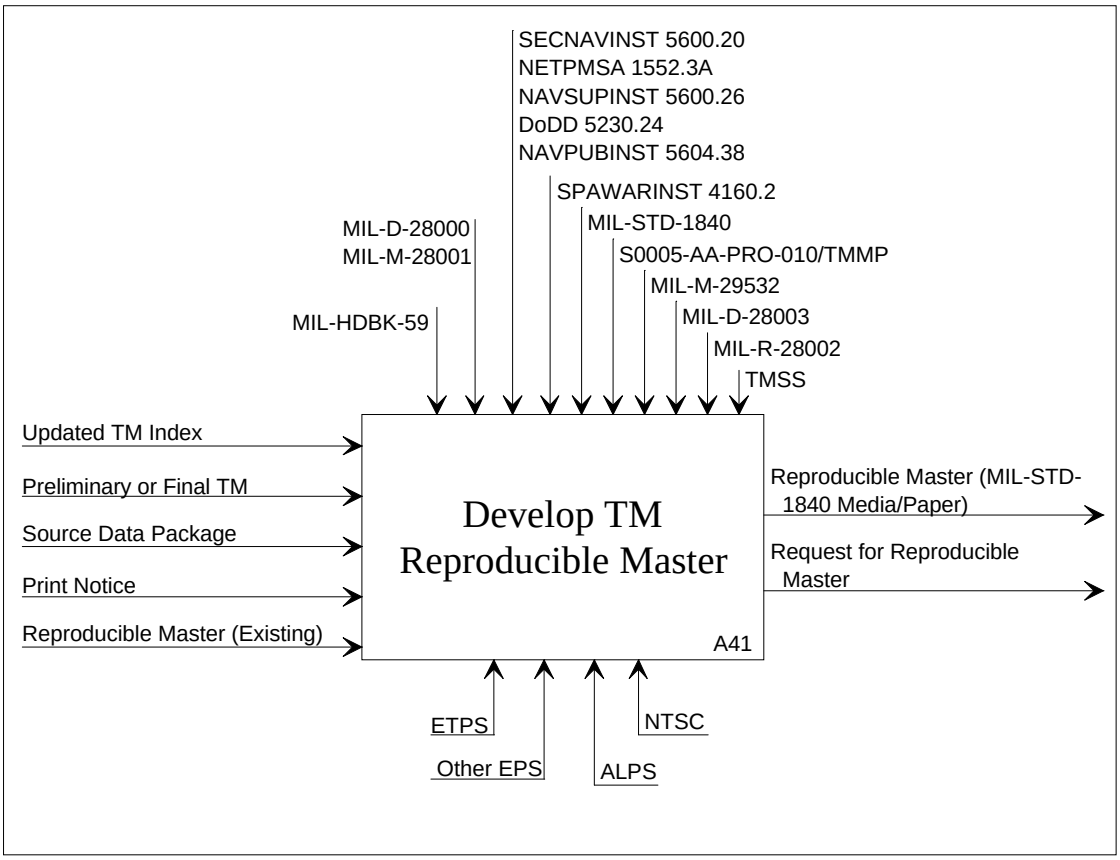

Figure 2-40, Navy - Develop TM Reproducible Master

2.2.2.4.1.2 Navy - Prepare Reproduction Package (A42).

The Navy supports a number of methods and procedures on the preparation of reproduction packages (print packages) for TMs which are to be reproduced as hardcopy products. Usually, hardcopy TMs are reproduced through NPPS. The function of reproduction package preparation is depicted in Figure 2-41, Navy - Prepare Reproduction Package. Six methods are described below in connection with the reproduction of paper TMs.

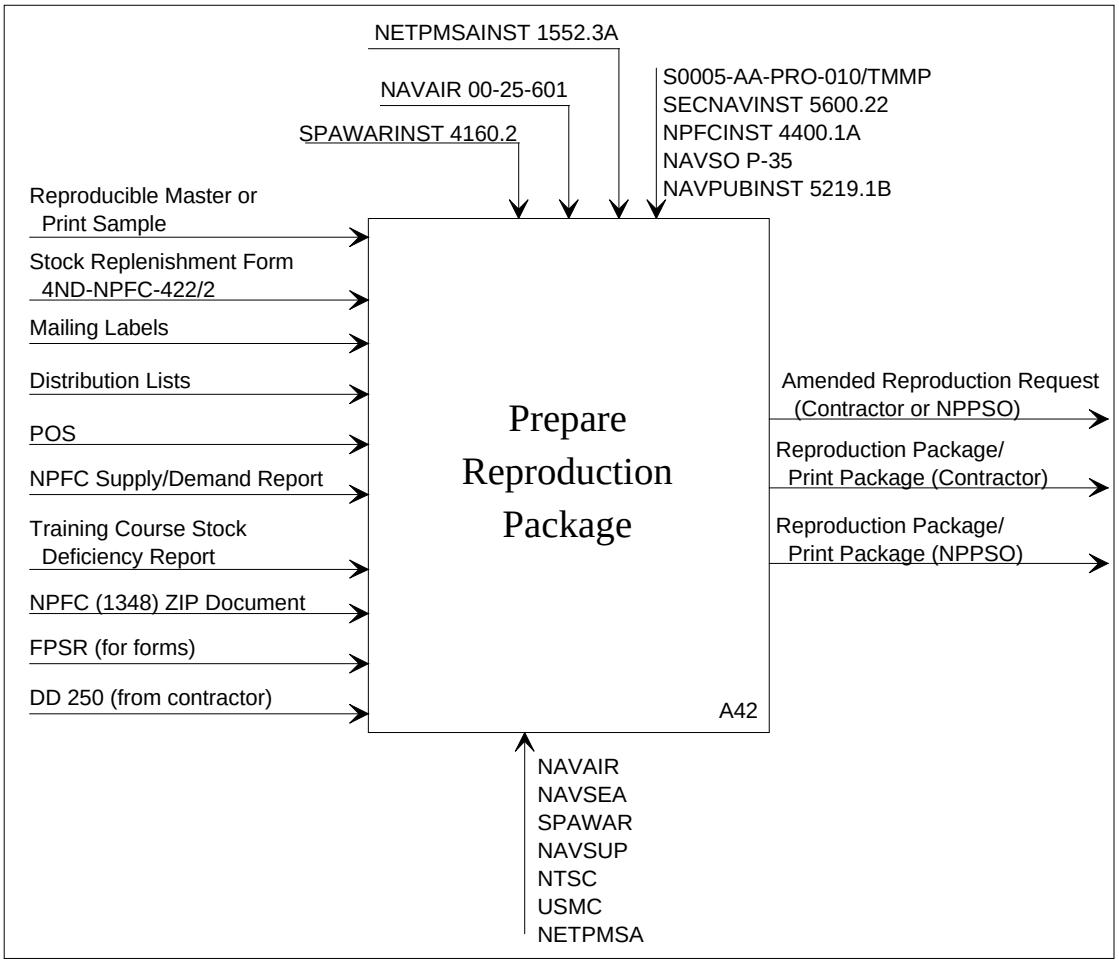

Figure 2-41, Navy - Prepare Reproduction Package

a. The NAVSEA reproduction package is called a print package and is used to request bulk printing of TMs. The print package is sent to printing and distribution activities which have been certified by NAVSEA. The print package consists of: 1) reproducible master (final reproducible copy); 2) Certification Sheet or Technical Manual Certification Sheet (NAVSEA 4160/8); 3) Delivery instructions (NAVSUP Form 1042); 4) DoD Printing Requisition/Order (DD Form 282); 5) Publications Running Sheet or Collation and Data Record Form [e.g., Defense Printing Service (DPS) Form 5603]; 6) Bulk shipping labels (NPPSDO PM 5216-25). When NPPS is to make distribution of TMs after reproduction, NAVSEA activities also provide mailing labels and distribution lists to NPPS facilities. Other Navy commands follow similar procedures.

b. NAVAIR develops similar information in connection with the printing of hardcopy TMs. In accordance with existing methods and procedures the following tasks are performed.

1. Technical manual cognizant field activities (TMCFA), also known as preparing activities, notify NATSF of TM changes/revisions proposed for printing and distribution. This notification is submitted to NATSF using the Publications Order Sheet (POS) 20 working days prior to the scheduled release to NPPS for printing/distribution actions.

2. Upon receipt of the POS, the NATSF reviews the Stock Replenishment Form 4ND-NPFC-422/2. After review of stock replenishment information NATSF coordinates on the reprint of the TMs with the responsible TMCFA which has developed the print requirement. If a printing action is to be authorized, NATSF provides necessary funds to NPPS to cover the printing and/or distribution costs and prepares the Reprint Action Request Form 4ND-NATSF-5600/126B which is forwarded to the TMCFA. NATSF also prepares and coordinates with TMCFAs on pre-addressed mailing labels. NATSF provides these labels and the applicable POS to the NPPS office designated to print and/or distribute the TMs.

3. Upon receipt of the Reprint Action Request, cognizant activities prepare a printing assembly sheet (e.g., 4ND-GEN-5063/2). The printing assembly sheet is attached to the reproducible master (hardcopy, artwork, or negatives) for each change, revision, or reprint submitted to NPPS for print and distribution.

4. NPPS performs printing services for Navy activities and assures that necessary printing production contracts are available for Navy printing and distribution requirements. On receipt of the printing and/or distribution requirement, NPPS may prepare a Requisition for Local Duplicating Service (DD 844) which is attached to the printing assembly sheet and reproducible master. This information as well as the delivery instructions, certification sheets, and shipping labels comprise the reproduction package forwarded to contractors.

c. Finally, contractors may also prepare reproduction/reprint packages. In this case, the package is inspected by Navy activities prior to print and/or distribution of reproduction copy. Navy activities generally follow accepted quality assurance procedures and prepare a DD 250 as required to indicate the results of inspection/acceptance of the reproduction/reprint package delivered by contractors.

d. The NETPMSA Navy Advancement Center reproduction package is called a print package and is used to request bulk

printing of training manuals and/or NRTCS. The print package consists of (1) reproducible master (camera-ready pages and artwork), (2) DoD Printing Requisition/Order Form (DD 282), (3) Job Information Sheet, (4) delivery instructions, and (5) shipping labels. A six to twelve month notification of low stock levels are submitted to the Navy Advancement Center using the Training Course Stock Deficiency Form, NETPMSA 1550/35. The material to be printed is submitted through NPPSDO for printing. The printed material is delivered in bulk shipment to NPFC and NETPMSA for stocking and issuing.

e. Forms sponsors notify NPFC of new/revised forms via the monthly Forecast of Procurement (FOP) listing. Upon receipt of the FOP from the sponsor with all pertinent information on the form, NPFC will assign a stock number if the form meets acceptance criteria. The following actions then occur:

1. The sponsor then makes up the procurement package for the initial procurement. This consists of the following: Forms and Publications Status Report (FPSR) (NAVSUP Form 1088), Camera Ready Copy, printing specifications, and a DD 282 with delivery instructions and any other special instructions.

2. The sponsor forwards the procurement package to NPPS, who then creates the reproducible copies of the form. NPPS keeps a copy for their file, and they forward the procurement package and a reproducible copy to NPFC to create a case history file.

3. NPFC obtains the price of the form and catalogs it into their Master Data File. A funding document is prepared and forwarded to NPPS for the form to be printed. Forms are funded through the Navy Stock Fund.

f. NPFC initiates replenishment action on technical manuals. When stock needs to be replenished, the Inventory Manager will calculate the replenishment quantity based on the past four quarters of demand. This quantity is annotated on NPFC DD 1348 ZIP document and forwarded to NPPS with a printing sample taken from stock. NPPS will assign a job order number and an estimated completion date (ECD). They will annotate the ZIP document with the job number and the ECD and return it to NPFC for their files. The Inventory Manager will add the job number and ECD to the Master Data File.

g. For NAVSEASYSCOM, the Naval Sea Data Support Activity (NSDSA) initiates replenishment action for NAVSEASYSCOM TMs. When stock needs to be replenished, the NSDSA will calculate the replenishment quantity, and provide the required ZIP documents to the appropriate Navy Publishing and Printing Service Office

(NPPSO).

2.2.2.4.1.3 Navy - Reproduce TMs (A43).

Organic reproduction of TMs is accomplished by the NPPS. Upon receipt of a reproduction package, NPPS facilities determine whether organic resources will be committed to the reproduction of TMs or whether the GPO will receive the reproduction package. This process is depicted in Figure 2-42, Navy - Reproduce TMs. A print control log (No. 5604/2) is maintained by NPPS offices to track funds obligated or expended for hardcopy printing or reproduction. Funds obligated and expended are reported monthly. As an alternative to the bulk reproduction of TMs, the Navy also intends to reproduce TMs on a print-on demand basis. For TMs distributed by a publisher (contractor), the Navy receives validation that distribution has been made. Contractors may also ship TMs directly to NPFC facilities which will make distribution and/or stocks TMs in excess of distribution requirements. As part of the reproduction process, the Navy requires that the cover sheets on afl TMs are bar coded with a stock number.

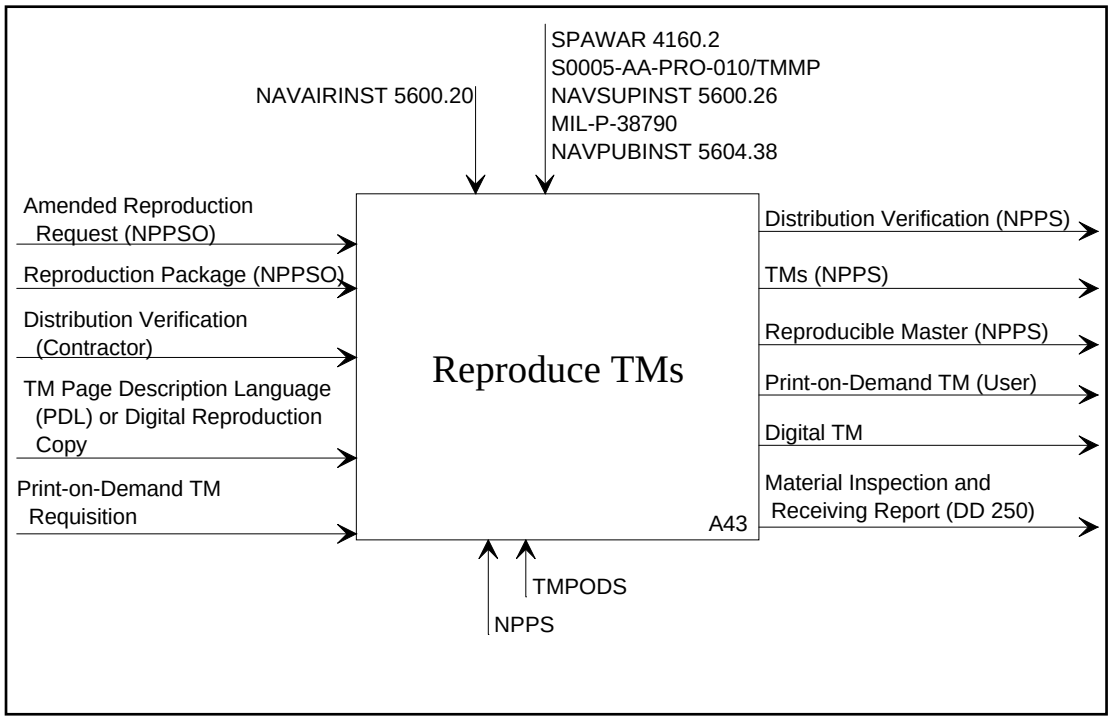

Figure 2-42, Navy - Reproduce TMs

2.2.2.4.1.4 Navy - Control Reproducible Material (A44).

The control of reproducible material is shown in Figure 2-43, Navy - Control Reproducible Material. Individual locator cards or computer records are maintained to control negatives, electronic media, artwork, and reproducible copy in association with the maintenance of the master data package for a TM. Locator cards or computer records show the physical location of the reproducible copy. When reproducible material is shipped to the Navy, the date of shipment and name of recipient are entered into the record. The Navy also ensures that stock number bar codes are entered on TM reproducible masters. When reproducible material is removed from storage, the name and organizational symbol of the recipient are recorded. When reproducible copy is returned for storage, it is checked for completeness, page integrity, location information is updated, and the copy placed in its designated location.

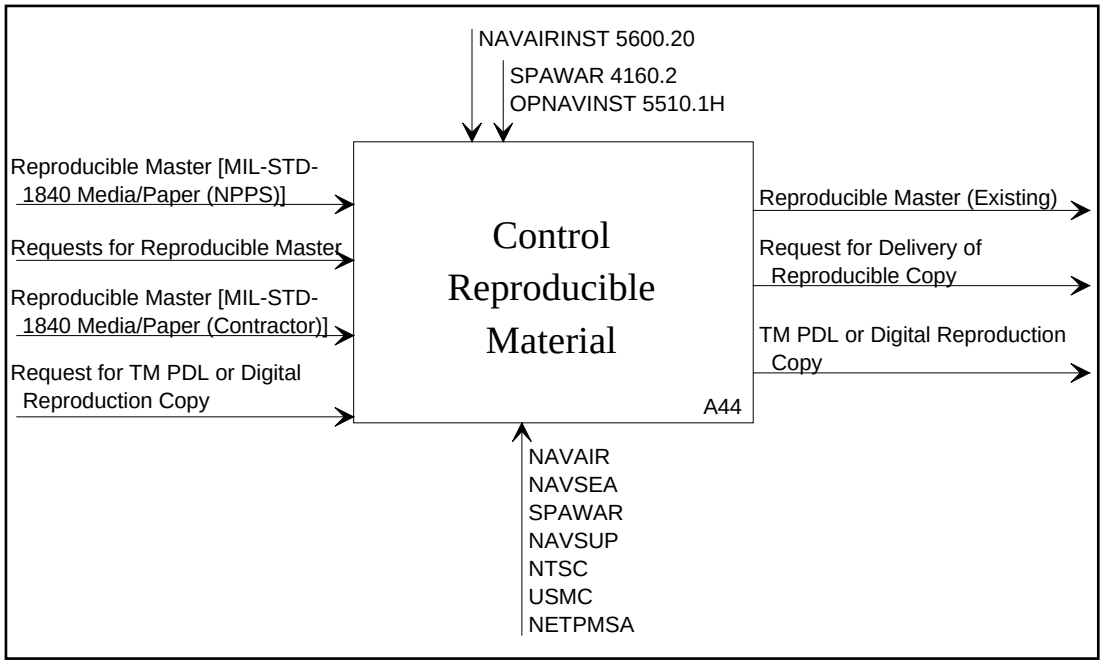

Figure 2-43, Navy - Control Reproducible Material

Reproducible material for a TM is maintained by Navy sites or by designated contractors. Reproducible copy is managed, for version control purposes, by publication number/revision number/change number. Navy activities may prepare requests for TM reproducibles when the reproducible copy is maintained by designated contractors. All classified material is stored in

accordance with OPNAV Inst. 5510. 1H.

2.2.2.4.2 Current Navy Organizations and Personnel Responsibilities.

The following reflects the key responsibilities of the primary participants to support these functions:

Naval Systems Commands and NETPMSA:

1. Develop or acquire TM reproducible masters for all technical manuals.

2. Prepare reproduction packages.

3. Provide the necessary funds to the Navy Publishing and Printing Service (NPPS) to cover printing and distribution costs.

2.2.2.4.3 Navy Equipment.

a. Standard office automation systems.

b. U.S. Marine Corps (USMC) ET?S equipment (see Section 5 for more details).

c. NPPS ALPS equipment (see Section 5 for more details).

2.2.2.4.4 Navy Deficiencies.

a. Delays exist between preparation of reproducible copy and distribution of TMs to users.

b. There is limited local printing capability.

c. Not all current Navy systems can handle distribution of digitized TMs.

d. The current system does not provide an automated cost accounting capability for TM reproduction.

e. The current system does not provide an automated interface between applicable organizations and NPPSOs for TM procurement information/status.

2.2.2.5 Stock TMs (A5).

2.2.2.5.1 Navy Description.

The Navy ensures TMs are stocked in quantities necessary to

meet requirements. The NPFC Master Data File, Requisition History File, Due-In File, TM Location files, Customer Address File, and Classified Certification File are used to control stocking and distribution of TMs. The Navy bar codes TMs to aid in the control and distribution of TM inventory. Navy directives and forms are managed by NPFC this same way.

2.2.2.5.1.1 Navy - Control TM Inventory (A51)

The Navy ICP and warehouse organizations are responsible for controlling the inventory of TMs as shown in Figure 2-44, Navy - Control TM Inventory. These warehouse organizations coordinate with TM managers, cognizant field activities, in-service engineering activities, and technical manuals management agencies (sponsoring organizations) to maintain control of TM inventory. The Navy ICP (NPFC) receives inventory balances and specific inventory transaction data from the Navy Supply Centers (NSCS) via automated Transaction Inventory Records (TIRs). In conjunction with the coordination of inventory and print requirements, the Navy ICP (NPFC) issues FOP information on a routine basis to verify print requirements for those TMs stocked at warehouse activities. Note: NPFC does not provide a FOP to NAVSEA (NSDSA). NSDSA reviews stock levels of NAVSEASYSCOM TMs in the NPFC Master Data File (MDF) at least weekly via a splicenet interface. TMs identified in the MDF as reprint candidates are downloaded to a microvax at NSDSA and compared with data in E-STEPS to automatically establish reprint candidates. NSDSA generates the ZIP and forwards it to the appropriate NPPSO.

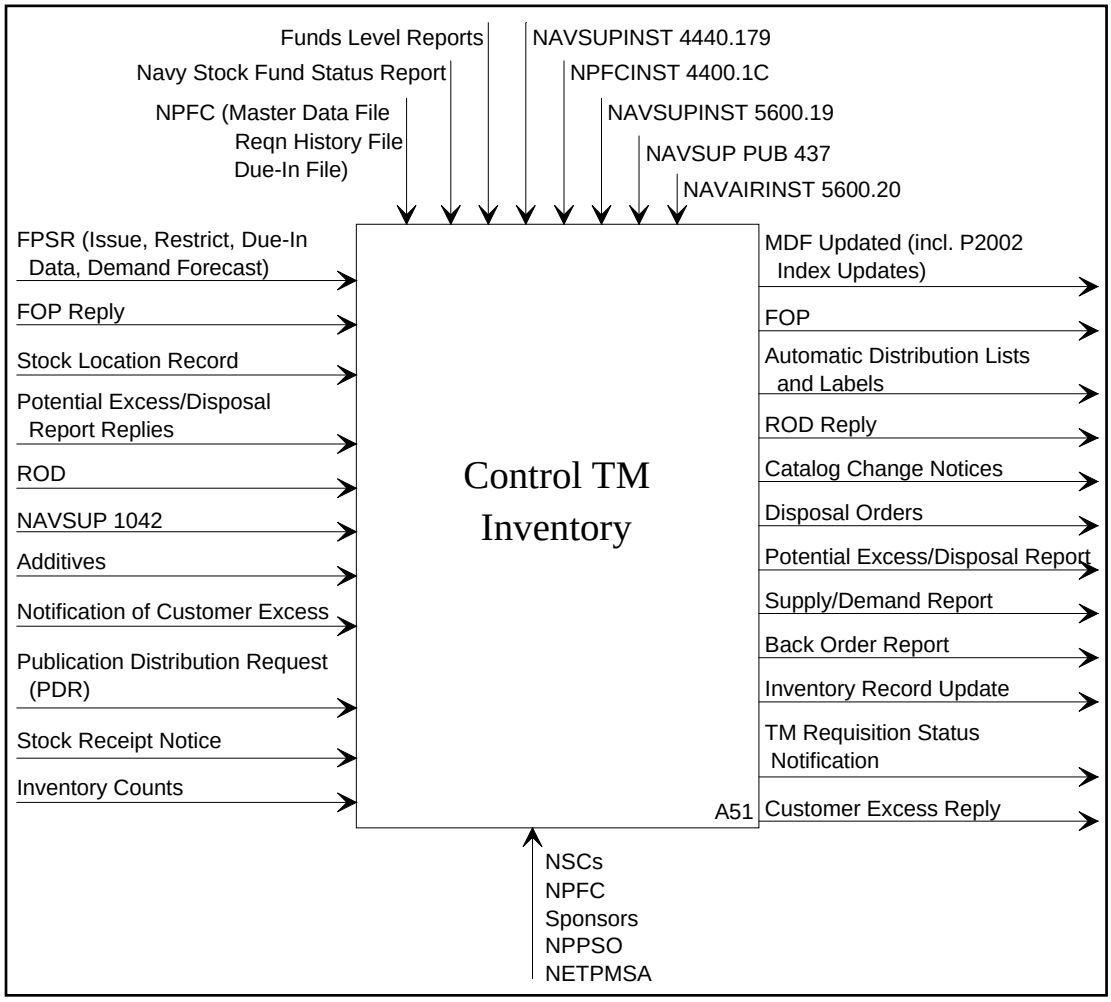

Figure 2-44, Navy - Control TM Inventory

The inventory of TMs stored in bulk at warehouse activities is controlled by monitoring the requirements established for TMs and ensuring that the number of TMs is adequate to meet known requirements. Initial procurement quantities are developed by designated TM managers at sponsoring organizations. Sponsors also develop FPSR information to notify NPFC of due-in material, requisitioning restriction levels, planned program requirements and other information.

To control TM inventories, reprint levels are established based on historical forecasts developed by NPFC and planned TM

requisitioning requirements developed by sponsors. Reprint levels and a projected date for reprint are established to cover total procurement lead time, safety level, and planned reprints. Six months prior to a forecasted reprint, a FOP is sent to. sponsors by NPFC. Sponsors review TM management data and ensure that no revisions are in work, prior to returning the FOP to NPFC with the following information: reprint quantity, TM currency verification, incorporation of changes, and other information on the TM. Reprint notices are also generated by the NATSF Information Management System and are reviewed by NPFC prior to the development of reprint packages (see A42). Potential excess reviews are also performed in conjunction with controlling TM inventory. This review is handled in a fashion similar to the development of printftprint requirements. Sponsors may also send Publication Distribution Requests (PDRS) to NPFC, providing due-in information related to TM procurements designated for both initial distribution and bulk stock. Finally, Master Data File records, including demand history, stock location records, due-in and requisition history files, and the P2002 Index are maintained and updated. These functions also apply to the control of directives and forms inventory.

2.2.2.5.1.2 Navy - Store TMs (A52)

The storage of TMs and the activities associated with it are depicted in Figure 2-45, Navy - Store TMs. Copies of TMs received from reproduction facilities are assigned a storage location in the warehouse and are physically placed in those locations. Large numbers of TMs may be stored in bulk storage locations. This backup stock is used to fill requisitions received after initial distribution is completed. NETPMSA maintains a small stock of training manuals and courses for use in conjunction with the administration of the NRTC program. If TMs are received from a commercial reproduction facility, a Material Inspection and Receiving Report (DD 250) may be completed and sent to the procurement office.

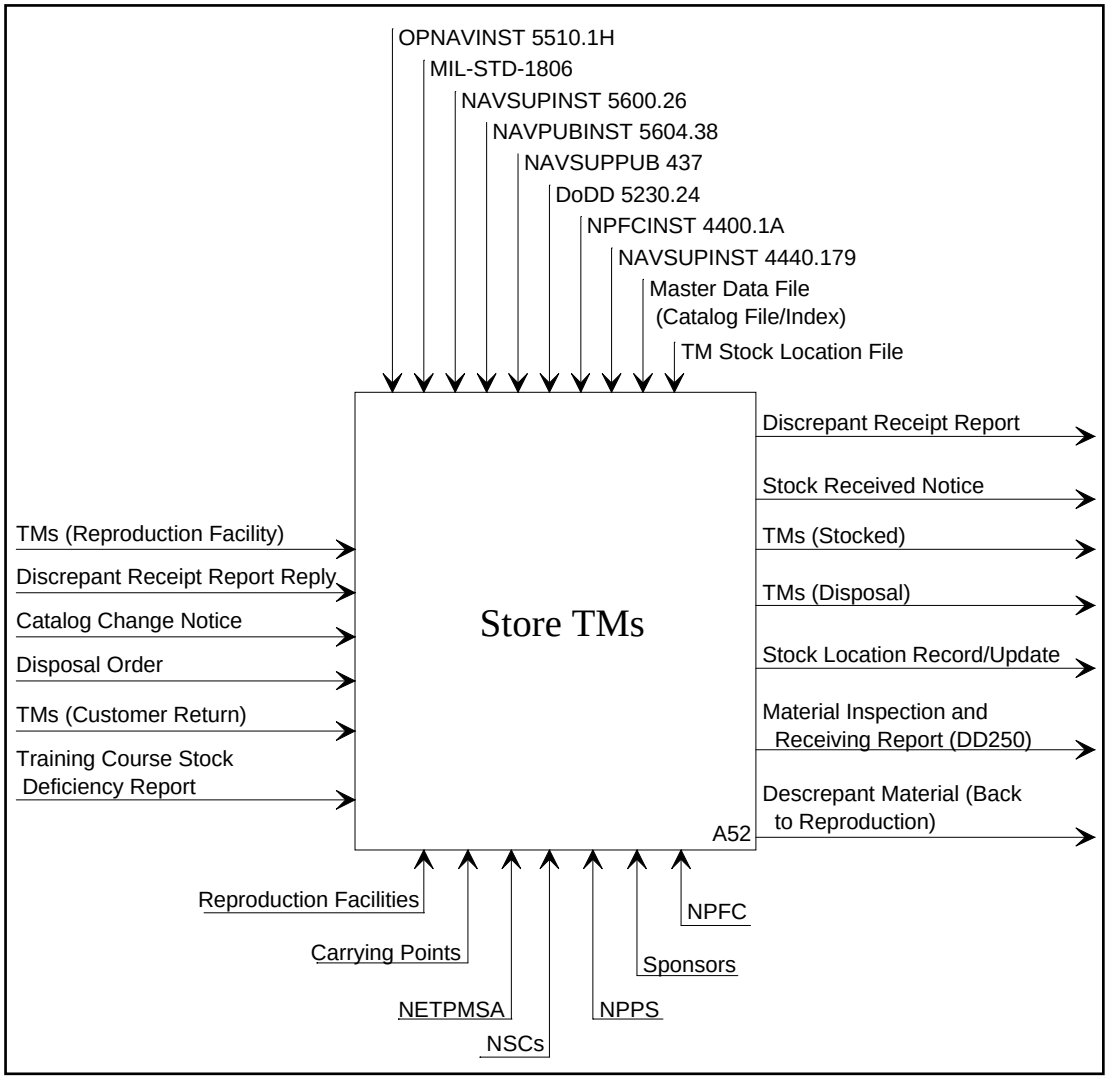

Figure 2-45, Navy - Store TMs

Quantity received information is used to update inventory records maintained by TM management organizations. Discrepancy reports may also be completed on receipt of TMs. Discrepancy reports record the receipt of unusable TMs, record incorrect quantities received, and report on any other problems not dealing with the technical content of the TMs.

Upon the receipt of inventory shipping instructions, TMs are pulled for issue.

These functions also apply to Navy directives and forms.

2.2.2.5.1.3 Navy - Issue TMs (A53).

TMs are issued from stock based on the receipt of either initial outfitting or replenishment distribution requirements. The issuing of TMs is depicted in Figure 2-46, Navy - Issue TMs. On receipt of the Issue Release/Receipt Document at NPFC or a referral at an NSC/carrying point, TMs are pulled from designated locations and put into shipping containers. Addressing information is posted to TM containers and postage affixed based on weight, destination, and the consolidation accomplished. TMs are mailed directly to Navy units or activity address codes. In conjunction with the issue of TMs, inventory information is updated to reflect the current quantities to TMs available. Shipping status is posted to History Files and status is sent to the customer. In the case of a Foreign Military Sales (FMS) requisition, status is sent to the Navy International Logistics Control Office (NAVILCO), who is the single point of contact for foreign customers. Occasionally, a sponsor will direct NPFC to issue material from stock as a follow-on initial distribution via submission of a Publication Distribution Request.

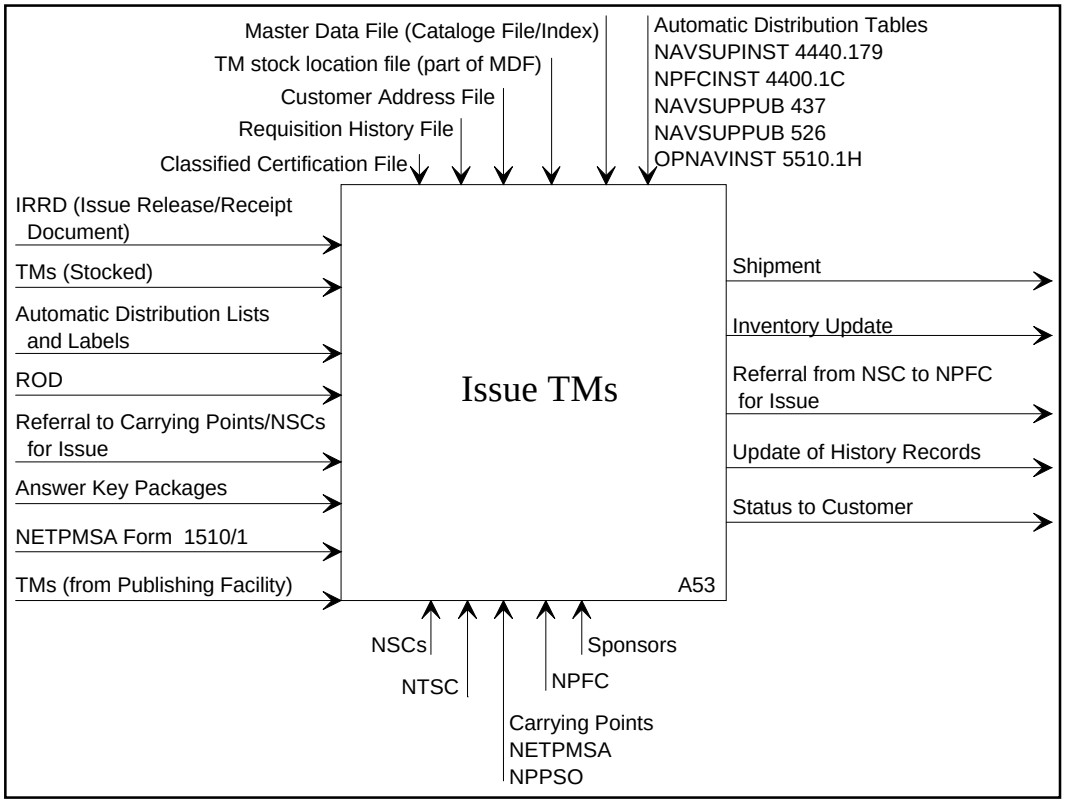

Figure 2-46, Navy - Issue TMs